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ABSTRACT

This manual, which is intended for vocational education and training (VET) providers, does the following: explains fundamental market research concepts; highlights situations where market research can help VET providers with their planning and policy development; and illustrates the uses of market research in VET institutions. The following topics are discussed: purposes of market research; situations where market research is useful (defining problems, determining information requirements, and deciding between in-house and commissioned market research); market research briefs (format and content); data for market research (existing data, new data, and sampling); sources of existing data (internal sources, external sources, and 14 public agencies providing statistical data about VET in Australia); collection of qualitative data (situations where qualitative data are useful, methods, and collector skills for qualitative research); collection of quantitative data (survey methods, questionnaire design, and questionnaire samples); and management of the research process (field work, data processing, data analysis, and report writing). Concluding the manual are five case studies focusing on conducting research to determine the following: best way(s) to use promotions budgets; reasons for declining enrollments; feasibility of raising fees for short courses; student satisfaction with courses or programs; and an institution's image in the community. The book contains 13 references. (MN)

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For Providers
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MARKET RESEARCH MANUAL



For Providers of
Vocational Education and Training



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Preface

This manual was commissioned by the Office of Training and Further Education to give providers of vocational education and training an overview of the role and importance of market research and a guide to why, when and how to use market research.

Senior managers with little experience of market research will appreciate this overview of ways in which market research can be used to advantage. Staff with responsibility for commissioning or conducting market research can use the manual as a text or a reference. It is not designed to be a step-by-step guide to conducting market research. Market research needs to be tailored to the specific needs of the organisation that requires marketplace information.

The main aims of the manual are to:

- familiarise non-specialists with fundamental market research concepts;
- indicate suitable contexts for market research processes for providers of vocational education and training;
- highlight situations in which market research can help providers of vocational education and training with their planning and policy development;
- identify a range of situations for employing market research within vocational education and training organisations;
- provide illustrative case studies of market research undertaken by providers of vocational education and training.

The format and content of the manual have been developed as the result of a number of depth interviews and group discussions with senior management and marketing personnel of TAFE institutes and private provider institutions in regional and metropolitan Victoria. These discussions, themselves a form of qualitative research, provided insights into the current status of market research amongst providers of vocational education and training, and an understanding of the range and level of market research topics that were important to them. On completion of the draft version of the manual, sample workshops were held to pilot the manual with users. Participants were drawn from the earlier discussion groups.



Introduction

The market for vocational education and training has changed markedly over the last five years. An increased number of providers, changes in the types and expectations of students and other clients, and changes in state and federal government policy, have all contributed to a competitive market for vocational education and training.

Universities, private providers and TAFE institutes now all compete for students. Students have a greater number of choices and are increasingly aware of their power to choose.

Providers of vocational education and training have to attract and satisfy a number of client groups: not only students undertaking training but their sponsors, employers, government agencies, parents, enterprises that commission training and the community in general. Community expectations are particularly important in regional locations.

The rapid pace of change in vocational training has left many people unsure of the relative merits of different suppliers of vocational education and training. Hence, there is considerable confusion in the marketplace about the role of providers of national education and training within the overall system.

Government policies now favour open competition between providers to determine who will deliver vocational education. All providers, including TAFE institutes are now competing with other suppliers to 'sell' their training and educational services to a range of clients including large government funding bodies, industry groups, individual companies and corporations and individual students.

Market research can help institutes to manage and optimise opportunities in this complex and heterogeneous market. Market research can increase the capacity for *informed* decisions in an environment where intuition and experience may no longer suffice.

Please note that the use of the term 'institutes' in this manual refers to both public and private providers of vocational education and training.

PURPOSES OF MARKET RESEARCH

Market research is a formalised, systematic approach to gathering and analysing information about your market in order to make sound management decisions. It can be used by providers of vocational education and training to provide valuable information for:

- management decisions, whether as direct input or to raise questions that need to be addressed before making a decision;

- 
- better understanding of the education needs of students and other client groups, of their attitudes towards your institute, of how they choose one institute over another and of how their attitudes and values affect their choice;
 - knowing what business enterprises require in terms of both course content and course delivery mechanisms, so as to be able to extend relationships already built up with local business to a wider business market;
 - better understanding of preferred delivery modes, for example student and employer preference for study at home, at an institute or at a workplace;
 - testing client satisfaction, for example with the range of programs and services that you are offering – an important issue given the importance of return business in this market and the importance of word-of-mouth recommendations;
 - evaluation of programs and services, for example using results of outcome-focused research with former students and their employers, to justify continued support by government or private enterprise;
 - communication strategies for publicity and promotion, for example to pinpoint whether the most effective channel of communication to your target markets is the local paper, the city paper, the radio or television;
 - development of the institute's image, for example to understand how student, employer, community and government perceptions of your institute and its image should affect your decisions about name changes, signage, colours or logos;
 - knowing your competitors and your position in the market relative to them, which is particularly useful for distinguishing the real threats from the supposed ones;
 - pricing of services to ensure that you are competitively priced *and* that you are receiving the optimum price for your services;
 - new market opportunities.

THE MARKET RESEARCH PROCESS

The process for conducting market research involves a number of key stages: investigating, planning, data collection, analysis, reporting and action or implementation. Each of these stages is discussed in detail in the following chapters. The market research process is outlined on the following page.

THE MARKET RESEARCH PROCESS

1 Investigating

Define the problem or issue to be investigated

What kind of information is required?

What key questions need to be answered?

Should market research be used?

If so, should it be conducted in-house or by an external agency?

2 Planning

Market research brief

3 Data collection

Obtain data from existing sources

Develop or select data-gathering instruments

Administer instruments, make observations

4 Analysis

Analyse data, document information

5 Reporting

Disseminate information to audiences

6 Action

Audience makes judgements, decisions



When
should
market
research
be used?

Market research is not always appropriate or necessary. Your collective knowledge may be sufficient for you to make a good decision. In many organisations, intuition and experience have long been the most common bases for decision making, and have often proved to be sufficient. In considering the use of market research, adopt the following process.

PROBLEM DEFINITION

State the problem explicitly. Market research is not a 'quick fix' or a panacea for all problems. It is important to be *explicit* about the main aim of the research, for example:

- Why are enrolments declining in key programs?
- Does the institute need to invest in open access learning technology?
- How can we best use the publicity budget to promote the institute effectively?

INFORMATION REQUIREMENTS

State the information requirements. What kinds of information would help? What questions need to be answered? How would the needed information be best sought? Alternatives to market research include intuition or personal knowledge, experience, and consultation with experts.

SHOULD MARKET RESEARCH BE USED IN THIS CASE?

Compare the value of the research with the cost of the research (see next chapter for a costing guide). If you are making decisions about where a new campus is to be situated, where the outlay for the campus is in the order of millions of dollars, then the cost of the project warrants spending some money on research to ensure that the decision is the right one. However, when deciding on course or program design, the research might be useful but might not warrant the cost.

IN-HOUSE OR COMMISSIONED RESEARCH?

Market research can be conducted by institute staff or by an external agency or by both. The decision will be influenced by the research aims, the institute's resources, funds available, the time line for the research and the availability of appropriate external resources.

Providers of vocational education and training usually conduct their research in-house. However, apart from a few TAFE institutes, most providers have had little experience of formal market research. Most marketing decisions have been made on the basis of analysis of existing data, and on sound intuition and experience.

Now, however, as institutes operate beyond their traditional markets, face increased competition and pursue higher quality courses, they need

CHAPTER 11 MARKET RESEARCH



sophisticated and extended market research studies. They need to consider whether it is efficient and effective to conduct their market research in-house or to commission an external agency to undertake the work. The following issues deserve consideration.

- **Cost:** There is a strong perception that the costs of using an external agency for market research are beyond the resources of most providers (see next chapter for a costing guide). Externally commissioned research can certainly be costly, but needs to be compared with the actual costs, including the many hidden costs, of in-house research.
- **Other resources:** Have you the necessary resources within the institute for the project? Although many institutes will have staff skilled in various aspects of research, they may not be available to work on the project within the set time frame.
- **Nature of the research:** Some forms of market research need to be carried out by external agents because the nature of the project requires a degree of objectivity that internal providers cannot manage, particularly if the issue is controversial. It may be sensible to get an external agent to conduct projects that are politically sensitive, for example research on renaming an institute, or reviews of programs or of organisational units within the institute. Other types of research, such as forecasting local demand, may best be conducted in-house because you probably know far more about the nature of the research than an external agent could be expected to know.
- **Degree of control required:** Some researchers are reluctant to use external agents because they prefer to keep all the research and information under their control. It is true that control is delegated when a project is outsourced. It is therefore important to form the right kind of relationship with the selected external agency.
- **Availability of appropriate external agents:** Providers of vocational education and training operate in a complex and complicated marketplace that has recently become very competitive. Some providers doubt the capacity of most external market research agencies to understand the context in which they are wishing to conduct the research. They also assume that it would be too time consuming to 'instruct' the external agencies about the market for vocational education and training.
- **Experience:** Lack of experience with outsourcing market research prevents some people using it. They often assume that it is going to be too difficult to manage, too costly, unnecessary and not as effective as conducting the research in-house.

IN-HOUSE OR COMMISSIONED RESEARCH?

- | | |
|---|---|
| 1 Expense/value | Is it worth the extra cost of using an external agency? Will you be getting value for money? |
| 2 Objectivity/credibility | Is there a need for objectivity in the study? |
| 3 Political expediency | Are there any political reasons why an external agent may be preferable? |
| 4 Broader perspective | Are you looking to broaden your perspective on the issue? |
| 5 Confidentiality | Is there a need for confidentiality? |
| 6 Professionalism/expertise | Do you have the necessary expertise and personnel to manage or conduct the project? |
| 7 Retain control | Is there a need/preference to retain control of the research project? |
| 8 Economies of time and technology | Are there likely to be economies of time and technology in using an external agency? |
| 9 Understanding of the market | Is there a need for a high level of understanding of the vocational education and training market? Do the available agencies have this understanding? |



Market
research
brief

This planning stage is necessary whether you are to conduct the research yourself or whether you are to commission someone else to do it. It is difficult to overestimate the importance of this stage of the process. If you state the overall requirements and objectives of the research clearly at the outset you are likely to get the information you want from the research.

FORMAT

Background

The extent of background information required will depend on who is conducting the research and how familiar they are with the context of the research. However, even if you are conducting research in-house, it is unwise to assume shared knowledge. From the outset it is important to create shared understanding of the background to the research among those commissioning the research, those conducting it and those who will act on its outcomes.

The background information should define the problem that faces the decision makers by addressing the following questions:

- What are the factors that have led to the need to make a decision?
- What information is needed for making the decision?
- How will the information be used? By whom?

Research objectives

Research objectives need to be clear, unambiguous and concisely stated. They shape the design, analysis and reporting of the research. Research objectives should state the key questions the research needs to answer and the kinds of information to be sought, such as:

- geographic scope – specific metropolitan, regional or rural areas;
- respondent scope
 - students (current students, students who have a high level of experience of your institute, new students, prospective students, gender, age)
 - parents
 - employers
 - government officials (local, state, federal?)
 - general community.



Research schedule

The quality of the research is influenced by the amount of time allowed for it. Ensure that there is enough time to do the research properly. A rushed piece of research can be counterproductive. Allow sufficient time to get the right person to do the research. It can be worth waiting for the best researcher available.

Schedule the various elements of the research to occur at appropriate times. Arrange data collection to occur at a time when your respondents are going to be accessible. For issues with only periodic interest for respondents, collect the data when respondents are concerned with those issues, for example it would be best to ask students or other clients about institute choices at a time when they are thinking about the issues. Otherwise you will get only theoretical responses. Don't plan to collect data from students during school or university holidays as they will be away. Avoid business-focused research at the end of the financial year when the people you want to talk to will not be available.

Costing and budget

The value of the information to be collected should not exceed the cost of collecting it. Specify your budget limits and expectations. If your planning process indicates that the research is beyond your budget, it may be better to abandon the research proposal than to spend less money on research that will not match your needs.

However, the most expensive research is not always the best one for the purpose. Cost should be balanced by a sound understanding of the value of the information to be collected and the importance of getting the management decision right.

INDICATIVE COSTINGS FOR MARKET RESEARCH

The following estimates, compiled in 1995-96, are subject to change.

Consultants

The cost of a research consultant can vary from between \$600-\$1200+ per 8-hour day, according to market forces, expertise, prestige, and specialist capacity for a niche market.

Case studies

The cost of a case study varies according to the number of issues to be investigated and the number of consultations within one case study site. Case studies can cost between \$3000-\$5000 per study or per site.

University researchers

Annual salaries, indicating levels of expertise, are listed below. To determine rough costs of employing these staff for shorter times, identify the length of time it is anticipated employment may be required for the level of staff expertise desired. Then calculate the costs on a pro rata basis.

Principal Research Fellow	\$80,176
Senior Research Fellow Level D	\$62,242-\$68,571
Senior Research Fellow Level C	\$51,692-\$59,605
Research Fellow Level B	\$42,198-\$50,111
Research Fellow/Assistant Level A	\$29,539-\$40,087

Casual rates per hour

Research Assistant Level A	\$21.88
Research Assistant 2	\$18.56
Research Assistant 1	\$16.37

Mail survey

Costs are calculated according to the necessary sample size, the response rate required and postage and labour costs for the following tasks:

- Advance notice letter
- Questionnaire accompanied by a stamped addressed envelope for its return
- Any necessary additional follow-up contacts or financial incentives designed to increase the response rate
- Data entry, coding, analysis, report writing.

Telephone surveys

Costs are calculated according to the necessary sample size, the response rate required and the labour costs of interviewers, based on:

- Estimated time of each interview
- Estimated time required to set up the interview arrangements and any follow-up
- Writing up the interview transcript
- Travel costs
- Analysis, report writing.

Depth interview and focus groups

The cost for a consultant to conduct a depth interview is about \$500-\$600 per interview. A consultant will charge about \$2000-\$3000 per focus group.

Further indicative costings can be obtained by contacting organisations that conduct market research. It is also helpful to discuss these issues with others in your institute or organisation who have undertaken similar activities.



Performance expectations and evaluation

The research brief needs to state:

- criteria on which the success of the research will be judged;
- the nature of the report and other products required and how they are to be used, possibly including information about number of copies of the final report needed, timing of other related research, the need for an interim presentation of results;
- who will be using the products and the format required.

Project management

The research brief should specify who is responsible for the overall management of the project from beginning to end and who is to manage all communication between the researchers and the end users of the research. Communication linkage on schedules, focus and interim findings is very important during the life of a research project. Misunderstandings need cause only a minor interruption if they are uncovered and rectified as early as possible in the research process, rather than emerging as major problems only after the report is written.

MARKET RESEARCH BRIEF

- Background
- Research objectives and questions
- Research schedule
- Costing and budget
- Performance expectations and evaluation
- Project management responsibility

SAMPLE BRIEF

Project

What drives our clients' satisfaction?

Background

ABC institute is a large multi-campus college located in the fast growing north-eastern corridor of Melbourne. Our services to students include diploma courses, short courses, industry-based courses and certificate courses.

To meet our objectives in relation to growth and planning requirements we need to develop a measure of student/client satisfaction. We would like to develop a client satisfaction monitor.

However, before we can monitor client satisfaction we have to determine what drives client satisfaction and also where ABC is currently positioned in terms of providing that satisfaction.

ABC already conducts client satisfaction surveys on *new* clients/students, but mainly to evaluate the performance of our promotions and enrolment staff. Questions in those surveys relate to the effectiveness of our publicity in attracting the student, the efficiency of our enrolment staff in meeting student needs and how satisfied students are with the institute's performance so far.

We have also conducted one-off *ad hoc* surveys at various times that have included components of client satisfaction.

Related research

Research was conducted for us in 1993 by XYZ market research on drivers of client satisfaction. It provided ABC with a hierarchy of the needs of its students/clients. These are listed below in order of importance:

- Range of courses
- Flexibility in enrolment
- Timing of lectures/classes
- Good instructors
- Industry contact
- Good student resources – library, canteen, child minding
- Friendly environment.

Note

Since the XYZ study in 1993, ABC's concept of 'client' has been extended to include anyone to whom we are marketing our services: not only the students who undertake our courses but also parents of many students, employers who encourage or subsidise or fund training at our institute, and governments. In the research to be undertaken now, 'client' needs to be defined in a way that acknowledges this extended concept.

Research objectives

- 1 To identify what areas of service, product delivery and distribution, operation and administration are important to ABC clients' satisfaction with the institute;

To identify our clients' perception of ABC's performance in each of these areas;



To provide standard measures of client satisfaction that can be used over time to provide comparative data.

- 2 To determine who our clients see as being our main competitors.

Notes

- 1 The views of all ABC clients are needed. Because of the diversity of our business, we wish to know about client satisfaction according to the courses or programs in which they are enrolled, for example:

- Diploma courses
- Certificate courses
- Leisure courses
- Short courses.

There may be further ways of segmenting our client group so as to obtain valuable information. This issue should be discussed before the research commences.

- 2 As we are a major post-secondary non-university institute, many people assume that we compete directly with other post-secondary non-university institutes. However, we also compete with private providers, universities and corporate programs in all the areas in which we offer courses and programs. We are interested in developing our understanding of the nature of this competition.
- 3 This research activity – to identify the drivers of client satisfaction – is the first stage of a three-stage project. The second stage will be directed at determining the relative importance to clients of each of these drivers (a quantitative study). In the third stage a tracking system will be established for internally monitoring the performance of ABC on these service drivers, and also the performance of our competitors.

Schedule

Results are expected within 6 weeks.

Budget

\$25,000

Performance expectations and evaluation

Performance on this project will be evaluated on the basis of the following:

- The research objectives are met.
- A clear, succinct report has been written providing information and solutions. The report will be ready for printing and will be presented on disk in the prescribed format.

-
- The research process has enhanced relationships between ABC institute and its client.
 - Timelines are met.

Project management

The project will be managed by a steering group chaired by the deputy director of ABC institute. Day-to-day project management will be the responsibility of the selected consultant.

Project management relationships and project milestones will be set down and agreed in the project contract to be signed by both parties.



Data for
market
research

Central to the design of the market research project is the kind of data to be collected. In many cases, sources of existing data can be tapped to provide sufficient information for meeting the research objectives. Where it is necessary to collect new data in order to meet the research objectives, researchers collect either qualitative data, quantitative data, or a combination of the two.

EXISTING DATA

Market research can often rely on information already collected. Your own institute routinely collects and collates information from students and inquirers, for instance their age, address, course preferences and future employment goals.

Published information in the form of government statistics, reports and other printed material can often go some (or all) of the way to answering the information needs of market research. Sources of this kind of data include Australian Bureau of Statistics, Department of Planning and local councils (demographic statistics), Department of Education, Employment, Training and Youth Affairs, Commonwealth Employment Service, industry bodies (statistics on employment trends) and Office of Training and Further Education (statistics on student enrolments). The next chapter provides further information on sources of existing data.

NEW DATA

Data collection has to be undertaken in cases where existing data is not available, is not relevant to your needs, or is out of date. Data can be qualitative or quantitative.

Qualitative research methods are used to explore issues and provide important insights into what people are thinking or feeling. They help you to get 'close' to the market and to obtain an objective view of issues such as:

- How would students like their courses to be presented?
- What do business clients think of our institute as a place to send their employees?
- How do people make decisions about which institutes to choose?
- What motivates a student to choose a particular course?

Typical tools of qualitative research are *depth interviews* (with one or two people) and *focus group discussions* with relatively small samples of people. The results are often reported in the form of direct quotes that give the essence of what people think about the issues raised. A later chapter deals with collecting qualitative data.



Quantitative research methods are used to *measure* responses to issues being investigated, for example:

- Fifty per cent of respondents were satisfied with the service and 40 per cent were dissatisfied (10 per cent 'don't know').
- Thirty per cent of Gippsland farmers are interested in a particular short course, program or service.

With the appropriate use of sampling, quantitative tools can reliably estimate the extent to which particular views are held by respondents representing target populations. The most typically used tool of quantitative market research is the questionnaire-based survey, conducted by an interviewer in a face-to-face interview or by telephone, or by self-completion (in a lecture theatre or by mail).

Combinations

The two approaches are not mutually exclusive. They are often used together, for instance depth interviews can be a useful way of refining the questions for a questionnaire survey.

TYPES OF DATA USED IN MARKET RESEARCH



Deciding on type of data needed

It is usually wise to precede quantitative research with some qualitative research. You need to have explored the issues – to know what they are, to know people's perceptions about these issues, to know the language they use – before measuring responses. If your resources are limited, scale down the quantitative research rather than leave out the qualitative, unless you are looking for very specific and simple information.

QUALITATIVE OR QUANTITATIVE METHODOLOGIES?

- Do you need to measure responses to particular questions – or to understand processes?
- Do you need to measure the strength of certain opinions or perceptions – or find out whether they matter?
- Can the issues be successfully translated to a questionnaire?
- How will the respondent react to a questionnaire?
- Will the respondent complete the questionnaire personally?
- Is a large sample needed? (How variable is the population and how accurate do you need to be?)

SAMPLING

Some data is collected on the basis of a *census*, for example you might survey *every student* undertaking a particular course. However, to survey everyone in a population is generally too costly in terms of time, money and personnel. A good sample can provide valid and reliable information.

Sampling is a complex technical matter (for a full discussion, see Kalton). However, key issues affecting good sampling practice are addressed below.

Sample size

The following issues influence the size of the sample to be taken, (for a mathematical discussion of sample size determination see Weiers and also Dillon et al).

Cost

Cost is a critical issue. However, if you can't afford the cost of the necessary sample size, don't do the research. Consider cheaper data collection methods



to maintain sample size, for example a telephone survey rather than a face-to-face survey. Alternatively, maintain the sample size but collect fewer items of data, for example there may be no need to have separate categories for male and female.

Degree of accuracy required

The greater the need for accuracy, the larger the sample size needed. As a very general rule of thumb, you need a random sample of 400 of a targeted population to get results that are within 5 per cent of accuracy.

The greater the variability of response within the targeted population, the bigger the sample required. The following table illustrates the point.

ACCURACY OF RESPONSE (%)

by sample size and level of agreement in target population

Sample size	Level of agreement in targeted population				
	90%	80%	70%	60%	50%
600	2.4	3.2	3.7	3.9	4.0
250	3.7	5.0	5.7	6.1	6.2
100	5.9	7.8	9.0	9.6	9.8

The table shows that when most people give the same response (when 90 per cent agree), you can obtain accuracy of ± 5.9 per cent with a sample as small as 100. But when they give highly variable responses (only 50 per cent agreement), the error increases significantly (to ± 9.8 per cent) for samples of 100.

Type of research approach

The type of research you are conducting will influence the size of sample that you will require. Quantitative approaches usually require fairly large samples to compare the incidence of opinions, attitudes or behaviours. For such purposes, statistical formulae which take into account the sample size and the variation in the population, can be used to calculate the level of accuracy of the results. These formulae can also be used to calculate the sample size needed to achieve reliability in your results. Readily available statistical packages such as Systat use such formulae.

Qualitative approaches seek to explore issues such as decision processes in order to produce results which are indicative rather than conclusive. Qualitative samples are usually small, so need to be carefully selected.

FACTORS DETERMINING SAMPLE SIZE

Factors indicating a large sample

- 1 Decisions to be based on the survey data have very serious or costly consequences.
- 2 There is a need or a demand for a very high level of accuracy in the data.
- 3 There is likely to be a high level of variability amongst the respondents to be surveyed.
- 4 The sample is to be divided into relatively small sub-samples during analysis and interpretation.
- 5 Project costs and timing vary only slightly with increases in the size of the sample.
- 6 Time and resources are readily available to cover the costs of data collection.

Factors indicating a small sample

- 7 Few if any major decisions or commitments are to be based on the survey data.
- 8 Rough estimates of results are sufficient for present purposes.
- 9 The population to be sampled is very homogeneous, with little variability between respondents.
- 10 Costs increase dramatically with sample size.
- 11 Budget constraints or time requirements limit the volume of data that can be collected.



Sample types

There are many ways of generating a sample. This section provides a broad overview of some of the more common ways of doing so.

Non-probability sampling

In this most common form of sampling used in market research, samples are selected by some non-random process such as the judgement of the researcher. Non-probability sampling includes:

- *Quota sampling* where the aim often is to obtain a sample that is similar to the targeted population in some characteristics such as age or sex. Often Australian Bureau of Statistics data are used to decide what quotas to apply. Sometimes the researcher makes a judgement based on the information required (half the interviews with people who have done a short course in the last 12 months and half with people who have never done short courses).
- *Convenience sampling* where the sample is selected for its convenience and low cost for the researcher. Asking students to volunteer to take part in research or intercepting students as they leave the cafeteria would be examples of convenience sampling.
- *Snowball sampling* where initial respondents are selected randomly, but where additional respondents are obtained from referrals from the initial respondents. This form of sampling is useful if respondents are hard to find.

With non-probability sampling, it is usually not possible to calculate sampling error (which tells you how accurate your results are). So you have to consider how to avoid introducing bias into the sample – or how to take bias into account in interpreting the results. For example, if you do telephone interviews to homes during the day, you would not be able to say your results were representative of the population because, in the main, you would be interviewing retired, unemployed and home duties people. If you asked students to volunteer to take part in a survey, you may find that only those who held strong views or who were very interested in the subject took part.

Probability sampling

With probability sampling, each element of the targeted population has a known chance of being selected for the sample. The sampling is done by mathematical decision rules. The advantage of probability sampling is that it is bias-free and permits the measurement of sampling error. It is often difficult to conduct probability sampling in-house, as you need to have lists of all sample elements, systems to help you randomly generate the sample,

and special systems to ensure the sample remains random. However, many external agencies have the capability to do probability sampling. Two of the most common forms of probability sampling are:

- *Simple random sampling* in which each sample element has a known and equal probability of selection. Some research agencies use a random telephone number generator in telephone studies.
- *Stratified random sampling* in which the overall population is divided into strata (such as people who have undertaken post-secondary studies and those who have not), and a random sample is generated from within those strata.

Sample design needs to be complex and precise. For a full coverage of this topic, consult some of the handbooks listed in the References.



Sources of existing data

Information needs can often be met by using the many rich sources of existing data available to the researcher. Tapping sources of existing data is usually faster and less costly than engaging in collecting new data. Sources of excellent data can be found both within your institute and externally. However, even promising sources of existing data may not give you the breakdown of information you want. You may want data for a specific industry or a particular geographic area, but find you can access only aggregated information. Sometimes the data may not prove to be recent enough for your needs because of the time lapse between collection and becoming available in published form.

INTERNAL SOURCES

Your own institute routinely and systematically collects information from students, staff and even people who simply inquire about courses. Examples include demand data (take-up of courses or inquiry levels for different types of courses) and demographic profiles (of students or inquirers). Much of this type of information is collected through staff use of a uniform instrument for collecting the data (usually a simple data sheet which staff can quickly fill out), and a means of systematically collating and analysing the data. However, internal data is collected for a range of purposes, some of it not sufficiently rigorously to be relied upon for formal research purposes.

EXTERNAL SOURCES OF STATISTICAL DATA

Below is a directory of excellent public sources of statistical data for vocational education and training. Researchers may find the geodemographic mapping service of the Australian Bureau of Statistics of particular value. Geodemographic data can provide information about a population in a particular geographic area. Geodemographic 'maps', available from the Australian Bureau of Statistics, draw on the considerable data collected via its censuses and surveys to promptly tailor information for your specific purposes.

Contact the National Account Manager, Market Research and Management Consulting, Tel (03) 9615 7781, Fax (03) 9615 7798.

Commercial data bases

Access to commercial electronic data bases can be gained via a personal computer, modem and appropriate software (for a full discussion, see Johnson). Thousands of such data bases are now available through a range



of different systems. Access is usually by subscription. There are five categories of commercial data bases:

- Bibliographic: indexing of publications
- Financial: detailed financial information about companies
- Statistical: demographic, econometric data for forecasting and doing projections
- Directory/encyclopedia: factual information about people, companies and organisations
- Full text: a full document can be printed out (for a discussion, see Green et al).

Data from all the above sources can sometimes be difficult to interpret or can be open to misinterpretation. It is wise always to check the source of the data and how and when it was collected. If possible, you should cross reference the information with other sources or, at the very least, examine how it fits with what you know, and whether it seems to make sense.

DIRECTORY

Selected data sources for vocational education and training

National and Victorian bodies responsible for providing statistical data relevant to vocational education and training are listed below, along with their key publications. Additional unpublished data are available from many of these sources.

Australian Bureau of Statistics

5th floor, Commercial Union Tower, 485 LaTrobe Street, Melbourne Vic 3000
Tel (03) 9615 7000
PO Box 10, Belconnen ACT 2616
Email address stat.info@abs.telememo.au
Tel (06) 252 6007

PUBLICATIONS

Guides and overviews (catalogue numbers)

A Directory of Education and Training Statistics 1995 (1136.0)
An Index of Information about Women (1117.0)
A Guide to the Australian National Accounts (5235.0)
Directory of Labour Market and Social Survey Data 1994 (1135.0)
Education and Training in Australia (4224.0)
Australian Social Trends 1995 (4102.0)

Catalogue of Publications (1101.0)
Directory of Industrial Relations Statistics (1134.0)
Information Paper: ABS Business Register - Recent Developments (8130.0)
Small Business in Australia (1321.0)
Year Book Australia (1301.0)

Census

Directory of Census Statistics (2910.0)
1991 Census Data Quality: Education
1996 Census Nature and Content (2008.0)

Employer surveys

Employer Training Expenditure Australia, July-September 1993 (6353.0)
Employer Training Practices Australia, February 1994 (6356.0)

Longitudinal survey

Employment and Unemployment Patterns

Regular labour force and supplementary surveys

The Labour Force (6204.0)
Transition from Education to Work, Australia (6227.0.40.001)
Participation in Education, Australia (6272.0.40.001)
Career Experience, Australia (6254.0.40.001)
Labour Force Status and Other Characteristics of Migrants, Australia (6250.0.40.001)
Characteristics of Small Business Owners, February 1995 (8127.0)
Employment Benefits (6334.0)
Job Search Experience of Unemployed Persons, Australia (6222.0.40.001)
Underemployed Workers (6265.0.40.001)
Labour Mobility, Australia (6209.0)

Special supplementary surveys

1990 Survey of Income and Housing Costs and Amenities, Persons with Earned Income, Australia (6546.0)
Training and Education Experience, Australia 1993 (6278.0)
Incidence of In-House Training in the Private Sector (6278.0.40.001 and 002)
Career Paths of Persons with Trade Qualifications, Australia (6243.0)
Adult Literacy Survey (Survey in 1996)
Disability, Ageing and Carers, Australia, Summary of Findings (4430.0)
Household Expenditure Survey (6530.0)
The Effects of Government Benefits and Taxes on Household Income (6537.0)



Other surveys

Population Survey Monitor, Adult Education and Training, May 1995 (4103.0)

National Aboriginal and Torres Strait Islander Survey 1994 (4190.0)

Commercial Training Providers, Australia 1994 (6352.0)

Household Expenditure Survey (6535.0 and 6537.0)

Other collections

Schools Australia (4221.0)

Australian Demographic Statistics (3101.0)

Estimated Resident Population by Sex and Age: States and Territories of Australia (3201.0)

Australian National Accounts, National Income and Expenditure (5204.0)

Expenditure on Education, Australia (5510.0)

Industry Profiles (8223.0)

Labour Force Projections, Australia (6260.0)

Projections of the Populations of Australian States and Territories, 1993 to 2031 (3222.0)

Industry Training Profiles, prepared for Australian National Training Authority

Australian Council for Educational Research

Private Bag 55, Camberwell Vic 3124

Tel (03) 9277 5555

Fax (03) 9277 5500

PUBLICATIONS

Longitudinal surveys

Youth in Transition

Australian Youth Survey

Australian Committee on Vocational Education and Training Statistics

Level 3, 95 Northbourne Avenue, Braddon ACT 2612

Tel (06) 246 9141

PUBLICATIONS

Quarterly data from state and territory training authorities

Australian Training Statistics, States and Territories

Australian Training Statistics, National Summary

Annual aggregate state and territory revenue and expenditure data
Collection of National Financial Data on Vocational Education and Training

Employer survey
National Employer Satisfaction (for release 1996)

Survey of destinations of 1994 TAFE graduates collected by the Australian Bureau of Statistics
Graduate Outcomes, Technical and Further Education, Australia 1995

Australian National Training Authority

AMP Place, 10 Eagle Street, Brisbane Qld 4000
Tel (07) 3246 2300
Fax (07) 3246 2490

PUBLICATIONS

Client and financial
Annual National Report

Department of Employment, Education, Training and Youth Affairs

PO Box 9880, Canberra ACT 2601
Tel (06) 240 8111

PUBLICATIONS

Guide and overview
Annual Report
Portfolio Budget Measures

Monthly, various data sources
Australian Regional Labour Market Assessments

Secondary analysis of demographic, labour force, educational and qualification data collected by the Australian Bureau of Statistics
Australia's Workforce in the Year 2005

Annual summary statistics from several sources
Education at a Glance

Quarterly
Australian Jobs Review



Unemployment levels and rates for regions and statistical local areas

Small Area Labour Markets

Estimates of labour force variables for labour force regions

Australian Regional Labour Markets

Annual data on overseas students

Overseas Student Statistics

Six-monthly summary of short and long term prospects

Job Futures

Trends in employment, vacancies and earnings

Labour Market Trends and Prospects

Collections from higher education institutions

Selected Higher Education Statistics

Six-monthly bulletin, based on a variety of sources

Skills Demand Bulletin

Monthly count of newspaper advertisements

Skilled Vacancy Survey

**Results of survey of labour demand by the Australian Bureau of Statistics
and summaries of trends in vacancies recorded by the Skilled Vacancy
Survey and Commonwealth Employment Service**

Short Term Prospects Bulletin

Department of Industrial Relations

GPO Box 9879, Canberra City ACT 2601

Tel (06) 243 7333

Fax (06) 243 7933

PUBLICATIONS

Survey of managers and union delegates 1989-90 and 1995-96

Australian Workplace Industrial Relations Survey, Technical Report and Data Release

Directorate of School Education

Rialto South Tower, 525 Collins Street, Melbourne Vic 3000
Tel (03) 9628 2222
Freecall for anywhere in Victoria 1800 809 834

PUBLICATIONS

Produced annually with several relevant tables

Summary Statistics of Victorian Secondary Schools

National Centre for Vocational Education Research

252 Kensington Road, Leabrook SA 5068
Tel (08) 332 7822
Fax (08) 331 9211

PUBLICATIONS

Annual data from all providers of vocational education and training that report through state and territory authorities

Selected VET Statistics

Office of Training and Further Education

GPO Box 266D, Melbourne Vic 3001
Tel (03) 9628 2333
Fax (03) 9628 3966

PUBLICATIONS

Enrolment data and student contact hours cross-tabulated by streams and fields of study, colleges, and other factors

TAFE College Statistics

Instructions to providers within the Victorian state training system for collecting 1995 student statistical data

Student Statistical Collection, 1995

Information, particularly by industry, to guide training providers for funding identified by the Office of Technical and Further Education

Industry Training Priorities: Victorian State Training System 1995-96

Listing of details of registered private providers in Victoria, including the scope of their registration

State Register of Private Providers of Vocational Education and Training

Australian Vice-Chancellors Committee

GPO Box 1142, Canberra ACT 2601
Tel (06) 285 8200

PUBLICATIONS**Annual survey**

Survey of Applicants for Undergraduate Higher Education Courses

Commonwealth Grants Commission

5-7 Torrens Street, Braddon ACT 2601
Tel (06) 275 3000
Fax (06) 275 8021

PUBLICATIONS**Estimates based on state data**

Report on General Revenue Grants Relativities

IBIS Group

Level 3, 1 Collins Street, Melbourne Vic 3000
Tel (03) 9650 2166
Fax (03) 9650 4033

PUBLICATIONS**Analysis of range of data from Australian Bureau of Statistics**

Industry Outlook Service

Syntec Economic Services Pty Ltd

123 Lonsdale Street, Melbourne Vic 3000
Tel (03) 9662 1911

PUBLICATIONS**Analyses of data from Australian Bureau of Statistics**

Guide to Growth

**Ministerial Committee on Education, Employment, Training
and Youth Affairs**

141 Rathdowne Street, Carlton Vic 3053
Tel (03) 9639 0588

PUBLICATIONS**Collections from schools and school authorities**

National Report on Schooling in Australia and Statistical Annex

Collections from government school authorities

Summary Finance Statistics from the Government Section of the National Schools Statistics Collection

Graduate Careers Council of Australia

PO Box 28, Parkville Vic 3052

Tel (03) 9344 4666

Fax (03) 9347 7298

PUBLICATIONS

Annual survey

Graduate Destinations Survey

State Training Board of Victoria

GPO Box 266D, Melbourne Vic 3001

Tel (03) 9628 2333

Fax (03) 9628 3966

PUBLICATIONS

Data concerning activities, achievement and policy directions for the Victorian State Training System.

Annual Report

Your local council is another source of labour market research and local economic forecasting. It is worth a telephone call to find out what information they have. Other research done by institutes and providers of vocational education and training is unpublished. It can be useful to inquire whether anyone else has done the kind of research that you are considering.



Collecting qualitative data

Qualitative data is collected in order to *understand* people's processes, attitudes and behaviour. It *describes* rather than *counts*. Qualitative data is usually obtained through conducting depth interviews, group discussions, case studies or systematic observation. Qualitative data is characterised by lengthy interaction with small samples of respondents. The data is presented in respondents' own words.

Collecting qualitative data can be more expensive than collecting quantitative data, because well trained interviewers may need to spend considerable time with respondents. Qualitative data also needs to be analysed by trained analysts. It is not possible to enter qualitative data into a software program and push a button for the results.

Qualitative data is often collected and analysed to reveal what sorts of questions should be directed to questionnaire respondents in a later study that collects quantitative data. The qualitative data collection (and later analysis) can ensure that the survey is based on questions that really matter to the researcher.

WHEN IS QUALITATIVE DATA USEFUL?

The major purposes and applications of qualitative research are described below.

- **Exploration:** Qualitative research is an excellent tool for developing understanding of complex processes, perceptions, values and attitudes. For example, it would be the best tool for developing a model of how students and other clients make decisions about which institute to attend. Analysis of such qualitative data would enable you to understand not only the primary motivations for their decisions but also their decision processes, the major influences on their decisions, when decisions are made, and what role the institute itself can play in facilitating the decisions.
- **Idea generation:** Qualitative data can be effective in generating new ideas. If your institute is aware of the need to structure and deliver its courses differently but unsure of options, qualitative data could help with developing options and gauging preferences for them.
- **Understanding motivation:** In attempting to understand 'underlying' motives for choice of institute, qualitative data can help you to move beyond the pragmatic reasons for the choice of institute to understanding the deeper motivations for choice. Depth interviewing would be the most effective way to probe a respondent's underlying motivations.
- **Description:** You might want to understand or be able to describe how students use the institute, the extent to which they make use of facilities



and services, or how they are helped or hindered in their use of the institute's services. Qualitative data can present a suitable range of responses, potential behaviour or attitudes that can then be quantified by means of a large-scale survey.

METHODS OF COLLECTING QUALITATIVE DATA

Depth interviews

Depth interviews (also called semi-structured interviews) explore issues with one person at a time. Depth interviews are good for exploring issues that are important to the respondent and developing an understanding of individual decision-making processes. The practice and theory of depth interviewing is well discussed by Jones and also by Gordon and Langmaid (chapter 6).

A depth interview typically takes about an hour to conduct. The interviewer records responses in detailed verbatim notes. A tape recorder is sometimes used to help in this process.

A depth interview must be a conversation, not a set of questions. Depth interviews have minimal obvious structure, the idea being to learn what the respondent thinks and knows about an issue, not to ask them specific questions. Interviewers have a set of major issues that are to be discussed in the interview – an interview guide. However, if an interview becomes just a series of responses to questions that you have already formulated, you will learn nothing new about what is important to the respondent. The real value of a depth interview is to find out about the issues that you could not predict without conducting the research.

Depth interviewing requires an expert interviewer who is able to assist the thinking processes of the respondent, keep them relatively on track and pursue relevant lines of inquiry that emerge during the interviewer 'conversation'. The interviewer must also be able to write up the interview results in an 'objective', perceptive and methodical way.

Focus groups

Focus groups comprise 6 to 10 people who address a topic for between one and three hours under the 'soft' guidance of a moderator. Although groups can be as small as 4 for specific purposes, group dynamics work best with 6 to 8 people.

Focus groups are used primarily for interaction between participants on a topic of interest to the research. However, they may also be used to study group processes. Groups can be used to pilot questionnaires.

The role of the moderator or facilitator is an important one. Rather than leading the group, the moderator informally encourages discussion amongst the group, suggests topics and keeps a balance between following the discussion guide (prepared by the researcher) and letting the conversation flow freely. The group's discussion is recorded on audio tape or video tape. For a discussion of the dynamics and process of focus groups see Goldman & McDonald, Hedges, and Gordon & Langmaid (chapters 3-4).

Organisational issues

When using focus groups, the following organisational issues need attention and decision.

- **Affinity versus non-affinity groups:** An affinity group is a group of people with an affinity of some kind. They may share a similar outlook on the issues under discussion, or perhaps a similar background. In non-affinity groups the individuals tend to have little in common with one another. Is it better for your research to have groups comprised of affinity groups or non-affinity groups?

Affinity groups will be easier to manage initially than non-affinity groups, but there is a danger that the participants will agree with each other and become focused on the social aspects of the discussion rather than on the ideas being discussed. Non-affinity groups can be difficult to manage. In extreme cases the chances of a useful dialogue are limited.

The purpose of the focus group will provide guidance as to which kind of group should be used. For example, a group comprising both students and their teachers may be unsuitable for an open and honest discussion about problems in course delivery but a good forum for discussing general problems facing the institute.

- **Location:** Where will you hold the group discussion? For an affinity group, it is often best to go to a location where respondents are comfortable, such as the staff room for teachers. Holding a group discussion between students and teachers in the staff room, however, would create an immediate disadvantage for the students. Holding it in the student union would create a problem for teachers. Try to hold non-affinity group discussions on neutral territory.
- **Previous group experience:** Some people often volunteer for group discussions because they enjoy the process of participating in group discussions. However, experienced 'groupies' are often not typical of the population that you are wanting to learn more about. Ensure that your results are not being biased by the presence of too many participants motivated more by wanting to share their opinions than by a genuine



interest and involvement in the topic. To reduce the number of 'groupies', use a standard recruiting procedure that screens out potential participants who have attended a group discussion in the last six months.

- **Incentive:** What incentive will you use to encourage people to come along to the group discussion? In consumer research participants are typically offered money or gifts for participation. In vocational education and training contexts, participation might be encouraged simply through being very direct about the aims of the project and promising to inform respondents of the results of the project.
- **Taping the session:** As it is not possible to facilitate a group discussion and to take notes at the same time, you will need to record the session on audio tape or video tape, for later transcribing and analysis.

COLLECTOR SKILLS FOR QUALITATIVE RESEARCH

Both depth interviews and group discussion require the use of highly skilled and trained interviewers. Gordon & Langmaid (chapters 5 and 7) provides a good discussion of interviewing techniques. A good interviewer needs to be interested in people. While it is possible to train people to be interviewers, if they do not have a basic interest in other people it will be difficult for them to become very good at it. To be effective, an interviewer must take into account the following:

Conduct

- **Accurate empathy:** The interviewer needs to be able to accurately perceive and communicate, with sensitivity, the feelings and experiences of another person, and to understand their meaning and significance. The interviewer needs to be able to understand the respondent's perspective on the topic even if it is very different from their own.
- **Sincerity:** The interviewer's responses must be sincere, not phoney. The interviewer should not patronise the respondent and should be genuinely interested in what the respondent has to say.
- **Non-judgemental:** The interviewer must accept the respondent's behaviour without imposing conditions. It is not the interviewer's role to make judgements about the values and beliefs of respondents.

Questioning techniques

The art of asking questions is central to obtaining good qualitative data from interviewing. The *open-ended* question is the most commonly used form of question in this sort of interviewing. It is designed to encourage the respondent to talk at any length they choose.

For example, the open-ended question, 'Why did you choose to come to this institute?' does not impose any limits on the response. The respondent could talk about any aspect of their decision to come to the institute ranging from practical concerns, 'it was on a bus route', to more subjective personal reasons, 'I like the "feel" of the institute'. There is no specific form of answer required.

Use of silence

The prime reason for the interview is to find out about the respondent's thoughts, feelings, attitudes and ideas. This will not happen if the interviewer is doing too much of the talking. Silence is a powerful technique in interviewing. Used well it can help generate effective discussion.

However it is probably the most difficult skill to learn to use when collecting qualitative data through interviewing. Few of us are comfortable with silence and we tend to 'fill up' silences. However, an interviewer who fills the silences won't learn about respondents' views. Ideally interviewers should speak for less than 10 per cent of the interview time. The following tactics are helpful for managing silence.

- Ask a question and then be quiet (ask the question and count to 60 under your breath).
- Tape your interviews to check if you are speaking for less than 10 per cent of the time.
- Become aware of both your own emotional state during silence and the state of your respondents.
- Monitor your own levels of anxiety. Interviewer anxiety is reflected in interviewers talking too much and answering their own questions.
- To facilitate discussion without speaking, use minimal encouragers such as nods, smiles and other forms of body language.

Building rapport

Set a good foundation for an interview or a discussion by making the participants feel at ease and feel that the activity is valuable and worth their participation. The following procedures will help.

- Explain the purpose of the research. People are generally not disposed to trust you and be frank and open with you if the purpose of the exercise is shrouded in mystery. There would be very few situations in which an institute would carry out research requiring that participants be unaware of the purpose of the project.
- Begin with direct questions and move on to open-ended questions. For example, begin with 'How far did you have to travel to get here?'



before getting to 'How do you feel about the courses that the institute offers?' The direct questions make it easy for people to respond first of all while the open-ended questions elicit the information that you really want to get.

- Listen well. The importance of listening may seem very self-evident. However, it is surprising how often moderators and interviewers can easily miss an important opportunity to open up the discussion because they are thinking about the next question rather than listening to the current response. Listening properly may require giving up some levels of control of the interviewing process and being prepared to follow the discussion as it naturally unfolds.
- For group discussions, arrive early so that you personally greet all participants on their arrival.
- Start group sessions by getting everyone present to talk informally about some aspect of themselves. This ensures that all participants have spoken at least once before moving onto the issues for discussion. Invite questions or comments from the group at any time.



Collecting
quantitative
data

Collection of quantitative (number) data enables the market researcher to measure the number of respondents who think, feel or behave in particular ways in relation to a wide range of issues, and to compare the responses that occur in different groups of respondents. For instance, are the responses of those aged 18-25 similar to the whole group? Are the responses of the women aged 18-25 similar to those of the men aged 18-25?

Quantitative data for market research is collected through surveys. Most market research surveys rely on structured questionnaires which need to be constructed carefully, tested and piloted if they are to yield good results.

SURVEY METHODS

There are three main survey methods: mail, telephone, and face to face. For a full discussion of mail and telephone interviews see Green et al (pages 176-184). The table below summarises the capacity of each of the three methods for meeting specific needs of a particular research project.

Important aspect of survey	Performance capacity		
	Mail	Telephone	Face to face
Complex questionnaire	Poor	Fair	Excellent
Long questionnaire	Fair	Poor	Excellent
Geographic spread	Good	Fair	Poor
Sample control	Poor	Good	Excellent
Response rate	Poor	Good	Fair
Respondent cooperation	Poor to fair	Good	Excellent
Ease of call-back	Poor	Excellent	Fair
Accuracy for sensitive questions	Good	Fair	Poor to fair
Control over interviewer effects	Excellent	Good	Poor

Mail surveys

Mail surveys require respondents to complete the questionnaire themselves. The anonymity and privacy of a mail survey is the most effective way to elicit accurate and open responses to sensitive questions. A further advantage of a mail survey is that there is no interviewer to bias the results.



Every respondent is responding to the same set of stimuli presented in exactly the same way. However, the questions need to be unbiased and clear.

It is wise to avoid a complex questionnaire in a mail survey. Respondents tend to become confused or to misunderstand the questions when grappling alone with a complex questionnaire.

Questionnaires for mail surveys should be kept as short as possible to optimise the response rate, especially as mail surveys tend to elicit a much lower response rate than other survey methods. The response rate, which can be as low as 5 per cent, depends on the nature and length of the questionnaire, the level of involvement of the participants with the topic surveyed, the ease of the process by which they can return the completed questionnaire to you, and conscientious follow-up. You may expect the best response rate from target groups who are well known to you and for whom the topic being researched is of vital concern.

Electronic mail surveys conducted by fax or by email have considerable advantages over traditional postal mail in that they can be more immediate and convenient for some respondents. They are likely to be used more frequently as more people obtain access to these technologies.

A major advantage of a mail survey over telephone or face-to-face surveys is its lower cost. However, the considerable costs of developing the questionnaire and of stationery and postage demand a reasonable response rate to make the exercise worthwhile. (Note: Instead of sending out stamped self-addressed envelopes to all potential respondents, contain the costs of a mail survey by using the FreePost system whereby postage is paid only on responses that are returned to you).

In-class surveys

In-class completion is an efficient way to have respondents fill in a survey. However, there may be some bias because the respondents may be concerned about the level of anonymity offered. Make sure you stress that the results are anonymous and will be analysed only after collation. Do not ask respondents to put their name on the questionnaire.

Telephone surveys

Telephone interviews are regularly used in market research today. They have advantages over mail surveys in that the information can be collected quickly and with a lower rate of refusal. People are more likely to agree to answer questions on the telephone than in a mail survey because they can respond immediately and with less effort.

From the researcher's point of view, telephone surveys can be conducted very quickly, there is no need for travel, and no delay in obtaining results. It can be very simple to phone back at a time that is more convenient if the respondent is unable, initially, to comply with the request for the interview.

Face-to-face surveys

Face-to-face interviews provide a lot of flexibility in the interviewing process. They are an excellent way of collecting large amounts of information using a complex questionnaire. They allow for interaction between the interviewer and the respondent. Materials such as lists to choose from, pictures to remind and so on, can be used as prompts. Non-verbal cues of confusion or reluctance can be observed and accommodated.

However, the interviewer can introduce distortion or bias by not administering the survey in exactly the same way for each respondent. Interviewers need to be trained to read the questions exactly as written with an even intonation, and not to show physical reactions such as surprise or disagreement to responses given.

Face-to-face surveys tend to cost more than mail or telephone surveys because they employ more interviewer time and usually require travel by the interviewer.

QUESTIONNAIRE DESIGN

The reliability and validity of survey results are dependent on the way that every aspect of the survey is planned. In the case of a questionnaire survey – whether by mail, telephone or face-to-face – the questions asked of the respondents need to be constructed with great care (for a full discussion on questionnaire design, see Alreck & Settle).

Effectiveness of questions

To be effective, survey questions should have three characteristics: focus, brevity and clarity.

Focus

Every question should focus directly on a single, specific issue or topic – not as easy as it might seem.

Wrong: Which institute do you like best?

Right: Which of these institutes would you choose to attend?

The researcher is attempting to measure student preference. By asking which institute the student likes best, you may find out which they prefer but it may not be the institute they would choose. They may like an institute



that is a long way from home or one where the entrance requirements are too high for them. The second question focuses on which of the institutes they would choose.

Wrong: When do you usually go to the institute?

Right: What time do you usually get to the institute?

Here the researcher wants to know what time the student ordinarily goes to the institute. The student could well respond to the first question with days of the week, term dates or times. The second question focuses on the specific information required.

Brevity

The longer the question the harder it is to answer it, and therefore the higher the possibility of error. Respondents are likely to forget the first part of a long question by the time they read or hear the last part. The greater efficiency of the right version is apparent in the two examples below.

Wrong: Can you tell me how many children you have, whether they are girls or boys, and how old they are?

Right: What is the age and sex of each of your children?

Wrong: If you have done one or more subjects in your course, please list the year and your result in each one, starting with the first subject.

Right: Please list the year and result of each subject you have done in this course.

Clarity

The meaning of the question must be clear to every respondent, a difficult task that requires avoidance of all ambiguity.

Wrong: What do you have to say about the institute that you go to?

Right: How much influence do you personally have on which institute you attend?

The first question can be interpreted as asking for the respondent's opinion of the institute, rather than about their influence on deciding which institute to attend.

Wrong: Ordinarily, do you take aspirin when you feel some discomfort or when you feel actual pain?

Right: Do you usually take aspirin as soon as you feel some discomfort, or only when you feel actual pain?

Here the researcher wants to know whether the respondent takes an aspirin *either* at the first sign of discomfort *or else* waits until there is the perception of actual pain. However, respondents might well reply to the first question with, 'Yes I do'. The researcher would not learn at what point the aspirin was actually taken.

Format of questions

Two kinds of questions are used in a questionnaire survey – open-ended questions and closed questions. Some questionnaires combine open-ended and closed questions.

Open-ended questions

Open-ended questions have no predetermined response schedule. They are used for eliciting a wide range of responses. However, open-ended questions, while giving more information, are expensive to use in a questionnaire because they take longer to ask and to answer and because they are more difficult to code and analyse. Recording verbatim responses in the field is difficult and time consuming. There is a high likelihood of error.

Responses to open-ended questions are not directly comparable with one another. They have to be placed into categories for editing and postcoding stages – a time-consuming and laborious task. Additionally, the analyst has to judge the meaning of the responses.

Use of open-ended questions in questionnaires should be limited. Exploratory information is better obtained through qualitative data that contributes to the questionnaire design. This is especially the case if you are going to analyse the survey results internally.

If you are going to use open-ended questions decide at questionnaire design stage how you are going to analyse them.

Closed questions

Closed questions are commonly used in questionnaires. They provide a predetermined list of possible answers for each question, from which respondents choose the answer that best suits their view or experience. Closed questions make for manageable analysis of the responses. Because some respondents may feel that none of the answers best reflects their view or experience, include a category for the respondent to nominate an 'Other' response or 'Don't know'.

Types of closed questions

The following seven types of closed questions are commonly used in surveys. In some surveys, a combination of types is used.



Yes/no options

Have you ever been to a training course?

Yes

No

Multiple choice

1 Respondents must choose one response from a given set

Which one of the following is the *most* likely to increase the skills of a manager?

(Tick one only.)

- A) On the job training
- B) Workshops on specific issues
- C) University training
- D) Previous management experience

2 Respondents are able to make more than one response from a given set

What in-service training have you participated in this year?

(You may tick more than one.)

- A) General introduction to union issues
- B) Program evaluation
- C) Management training
- D) Improving organisational effectiveness
- E) Positively coping with stress

Likert scale

Respondents are asked to rate the extent to which they agree or disagree with a statement

The institute should provide the option of classes on Saturdays and Sundays.

(Circle the column that best matches your view.)

Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	2	3	4	5

Guttman scale

Respondents must select from a scale which is cumulative

(that is, if a respondent has ticked B, it implies that they have achieved A)

What is the highest level of education you have achieved?

(Tick one only.)

- Primary school
- Secondary school
- Tertiary institution

Semantic differential

Respondents are asked to rate something at any point along a continuum with opposed adjectives at either end

Rate the training workshop that you participated in today along the following dimensions. If you found the workshop very useful, you should circle a high number. If you found the workshop useless you should circle a low number. If you did not find it particularly useful or useless, you should circle a number in between. The same applies to uninteresting/interesting below.

Useless			Neither useful nor useless						Useful	
1	2	3	4	5	6	7	8	9	10	
Uninteresting									Interesting	
1	2	3	4	5	6	7	8	9	10	

The ten-point scale used in this semantic differential may create some problems in analysis. What constitutes a good result on a ten-point scale? There is no simple and absolute answer to that. With one group of respondents, 7 out of 10 might be considered a top score while, with another group, 7 out of 10 might be only average. These scales need to be analysed very carefully within the context of the overall responses of the sample.

Rank order

Respondents are asked to put items in order of importance

Please number the following health problems in the community in order of importance. Place a 1 next to the problem which you consider most important. Place a 2 next to the problem which you think is next in importance and so on through to 4 for the problem of least importance.

- ___ Alcohol and drug dependence
- ___ Loneliness and isolation
- ___ Motor vehicle accidents
- ___ Pollution

While rank ordering is a popular form of scaling for researchers, if respondents are asked to rank order more than five items, they fail to make real discriminations between items.



The language of the questions

Questions in a survey must be expressed in language that is simple and unambiguous. Both vocabulary and grammar are important. A good discussion of question form and question wording can be found in Schuman & Presser and in Sudman & Bradman.

Vocabulary

The vocabulary has to be understood by the least sophisticated of your respondents. Don't presume too much. Everybody has a *core* vocabulary that consists of words that they use in everyday speech, and a wider vocabulary of words that they recognise and understand but don't use commonly. And there are words that they do not know at all.

As a rule of thumb the researcher should always use words that are in the *core* vocabulary of the respondents. The following (rather extreme) example demonstrates the effectiveness and clarity of simple language.

Wrong: What emotions were evoked by perceiving the spectacle?

Right: What kinds of feelings did you have when you saw it all?

Be wary of using technical terms which *you* may use all the time but which respondents may not be familiar with. For example, don't ask a student about how many 'core courses' they are doing unless you are sure that they will understand what you mean by that term.

Grammar

Sentence structure is important in ensuring that your survey is clear and unambiguous. Try to use a simple sentence with just a subject, a verb and a predicate. Try to avoid compound sentences. Change long dependent clauses into single words or phrases wherever possible.

Wrong: What would you do when you had only a few things to buy and there were a lot of people in the checkout line?

Right: Suppose you only have a few things to buy. There are a lot of people in the checkout line. What would you do?

Wrong: If you didn't have a reservation ahead of time and you found out that the only seats that you could get were at the very top of the upper balcony, what would you do?

Right: What would you do if the only seats available were at the top of the upper balcony?

Framing the questions

Error and bias can be introduced into the research through poorly framed questions. If the questions themselves cause error in the response, such systematic bias will seriously affect your results. Five commonly found errors are described below.

Ambiguity

In the first question below there is no indication to the respondent of whose point of view they should take in framing their response. Consequently, some respondents may state their own preferences while others may state what they consider to be the general view. The correct question indicates that the unit of analysis is to be the respondent themselves.

Wrong: How important is it for institutes to provide a large number of different types of courses?

Right: How important is it to *you* that the institute you attend provides a large number of different types of courses?

Emotive language

Avoid vocabulary that might bias the response, especially emotive adjectives. Use non-emotive, neutral terms. The example below shows how just one word can make a big difference in the meaning conveyed.

Wrong: Would you favour increasing course fees to cope with the current education *crisis*?

Right: Would you favour increasing course fees to cope with the current education *problem*?

Double-barrelled questions

A common problem in poorly constructed surveys is to ask two questions in one. A respondent cannot give a single answer to a double-barrelled question. The solution is to ask two single questions. It also takes less time to answer two simple, clear questions than it does to answer one poorly constructed question.

Wrong: What do you think of the quality of the food and service in the canteen?

Right: What do you think of the quality of the food in the canteen?
What do you think of the quality of the service in the canteen?

Leading questions

Leading questions predispose the respondent to answer in a particular way and seriously bias the results.

Wrong: Don't you feel the institute should introduce the new policy?

Right: Do you feel that the institute should introduce the new policy?



Loaded questions

A loaded question is a subtle form of a leading question. The loaded question includes some wording or phrasing that is designed to influence and sway a response. In the example below, the phrase 'an excellent outcome' suggests a very desirable goal. It would be difficult to disagree with this sentiment without appearing not to value excellence as an outcome.

Wrong: Do you advocate longer contact hours to ensure an excellent outcome in this course?

Right: Does this course require more contact hours?

COMMON PITFALLS IN WRITING QUESTIONS

Pitfalls	Examples
Poor choice of vocabulary	Wrong Are you cognisant of all of the concepts to be elucidated?
	Right Do you know about all the ideas that will be explained?
Poor grammar	Wrong What would you do when you had only a few things to buy and there were a lot of people in the checkout line?
	Right Suppose you only have a few things to buy. There are a lot of people in the checkout line. What would you do?
Ambiguity	Wrong How important is it for institutes to provide a large number of different types of courses?
	Right How important is it to you that the institute that you attend provides a large number of different types of courses?
Emotive language	Wrong Would you favour increasing course fees to cope with the current education crisis?
	Right Would you favour increasing course fees to cope with the current education problem?

Double-barrelled questions

Wrong

What do you think of the quality of the food and service in the canteen?

Right

What do you think of the quality of the food in the canteen? What do you think of the quality of the service in the canteen?

Leading questions

Wrong

Don't you feel the institute should introduce the new policy?

Right

Do you feel that the institute should introduce the new policy?

Loaded questions

Wrong

Do you advocate longer contact hours to ensure an excellent outcome in this course?

Right

Does this course require more contact hours?

QUESTIONNAIRE DESIGN

- 1 Focus precisely. Every item should focus on one specific issue or topic.
- 2 Keep each item brief. The longer the question, the greater the possibility of error and bias.
- 3 Strive for clarity. Every respondent must know exactly what is being asked.
- 4 Use core vocabulary. Use the same words as the least sophisticated respondent would use in common speech.
- 5 Use simple sentences. Two or more simple sentences are preferable to one compound sentence.
- 6 Avoid sources of bias and error. Be sure items are free from the factors that create bias and error.
- 7 Use structured questions. Unstructured questions usually generate large amounts of poor-quality data.
- 8 Avoid response bias by carefully reviewing questions, the order of questions and the structure of the questionnaire.



Constructing the questionnaire

Overall organisation

Introducing the questionnaire

Most questionnaires rely on the cooperation of respondents. Make sure that the questionnaire survey is introduced in a manner that makes it appealing to the potential respondent. A good introduction increases the response rate and positions the research as credible and worthwhile.

Initial questions

The questionnaire should begin with questions that are non-threatening and that 'set the stage' for the questions to follow. These initial questions should also be relatively simple, quick and easy to answer and generally applicable to all respondents.

Body of the questionnaire

This is where questions relating to the major issues in the research are asked. The complex and detailed questions are asked in this section. Make sure that the questions follow a logical order or flow and do not seem to the respondent to jump all over the place.

Conclusion

The final section of the questionnaire may be used to ask the more sensitive questions and demographic questions. These questions are generally asked last because by that time the respondent should be feeling comfortable about answering questions and be more likely to be drawn on a sensitive topic. Alternatively, if the respondent refuses to continue with the questionnaire you already have most of the responses that you need.

Grouping the questions

Within each of the above three sections, specific questions (or items, as they are often called) are grouped within subsections. A full questionnaire will often have 100 or more individual items in it.

A well constructed questionnaire should appear to the respondent as a logical, integrated and consistent 'exchange' between the researcher and themselves. When you are designing the final format of the questionnaire think about the way the respondent will perceive the questions and try to make the flow and style of the questions meaningful and credible to the respondent.

By topic

Questions relating to the same topic may be grouped together. For example, a questionnaire about institute preferences may contain questions about

three different topics: the general attitudes of the respondents to post-secondary education; specific attitudes to specific institutes; and actual behaviour in choosing an institute. Items relating to each of the topics would be grouped together.

By scaling technique

If a number of survey questions are to be answered using the same scaling technique, then it may make sense to group these questions in one section of the questionnaire. For example, all the questions using a Likert scale (Strongly agree, Agree, Disagree, or Strongly disagree) could be grouped together. This makes the response task easier because the respondent has to learn to use that scale only once.

Branching or 'skip' questions

In most questionnaires there will be some questions that will not apply to all respondents. In such cases you need to include a 'skip' instruction. For example, you may want to ask specific questions of respondents who had heard about your institute through a newspaper advertisement. The questionnaire must establish whether or not the respondent did hear about the institute in this way. If so, the specific question(s) will be asked but, if not, respondents would not be asked the question(s) but told to move on to another item. This process is demonstrated in the example below.

USE OF 'SKIP' OR 'GO TO' INSTRUCTIONS

Did you hear about this institute through a newspaper advertisement?	Yes	No
[If you answer No, go to Question 5]		

Did you hear about this institute through a newspaper advertisement?	Yes	No
[If you answer No, skip Question 4]		

How did you hear about this institute?	Newspaper	[Go to Question 5]
	Television	[Go to Question 6]
	Friends	[Go to Question 7]
	Teachers	[Go to Question 8]

The 'go to' instruction is ordinarily used when it is necessary for the respondent to pass over several items. The 'skip' instruction is used when only one or two items need to be passed over. The questions to be 'skipped'



should immediately follow the instruction, otherwise it will be too confusing for the respondent or for the interviewer. It is not a good idea to use this form of 'skipping' in a self-administered questionnaire but it can be used in interview surveys.

Instructions

All questionnaires require the inclusion of some instructions to let the interviewer or the respondent know how they are to ask or respond to a question. Instructions will generally apply to a set of items.

Scaling instructions

Scaling instructions should be clear, concise and unambiguous. The first set of instructions below does not indicate how many of the items should be rated, is unclear about whether the items should be ranked or rated, and does not indicate where the response is to be recorded. Although you might think that all these things would be obvious to most respondents, it is important to present the instructions in the clearest possible way to minimise potential misunderstanding and error.

Wrong

Please rate the importance of the following.

Scale						
Unimportant	1	2	3	4	5	Important
☐ Library services						
☐ Cafeteria facilities						
☐ Course options						
☐ Timetable flexibility						

Right

Please rate how important each of these items is to you. If it is not at all important to you, choose number 1. If it is very important to you choose the number 5. If it is somewhat important to you, choose a number from the middle of the scale. Write the number you choose in the space in front of the item.

Scale						
Unimportant	1	2	3	4	5	Important
☐ Library services						
☐ Cafeteria facilities						
☐ Course options						
☐ Timetable flexibility						
☐ interviewer instructions						

Interviewer Instructions

When an interviewer is administering a survey questionnaire to respondents either by telephone or face to face, there are many occasions when it is necessary to include instructions to the interviewer.

Interviewer instructions should be clearly distinguished from the questions to be asked of respondents. Instructions to the interviewer should be enclosed in parentheses or written in upper case letters or italics, to indicate their status.

Q20

I'd like to get some thoughts from you on how the institute can increase its enrolments. Which of the following do you think the institute should focus on to increase enrolment levels? *Rotate the starting point between respondents. Circle each one nominated. Should it focus on:*

- | | |
|--|---|
| Changing the course options in some way? | 1 |
| Lowering the cost of the courses? | 2 |
| Targeting different types of participants? | 3 |
| Promoting the institute more heavily? | 4 |
| Other suggestion which is: | 5 |

Piloting

The final step in questionnaire construction is to *pilot* the survey, to test it with a small number of respondents. Depending on the size of the study and the range of respondent types, a pilot of 10 to 30 people is usually sufficient (see Hunt et al for a full discussion of the issues involved in piloting a questionnaire).

Respondents should be told that the questionnaire is a pilot, and that they are free to comment on anything which they find confusing or unclear or to ask questions if they need more information. Interviewers should also be observant, noting any difficulty experienced by respondents in completing the questionnaire.

Piloting the questionnaire is also an excellent way of timing how long the questionnaire takes to complete. If you are paying someone else to collect the data, this can be very important, as you will know more about the cost of collecting the information.

You should never use a questionnaire that has not been thoroughly and fully piloted.



MAXIMISING RESPONSE RATES TO THE QUESTIONNAIRE

- 1 Is the questionnaire easy to complete?
- 2 Does the first page have a simple introduction explaining the purpose of the research, the importance of taking part and assuring confidentiality?
- 3 Is the wording used straightforward and expressed in everyday language?
- 4 Does the first page of the questionnaire contain only easy non-threatening questions? It is better to start off with simple, factual questions rather than complex, opinion-based questions.
- 5 Are the more complex questions reserved for the main body of the questionnaire? Do they proceed from the general to the more specific in an logical, integrated manner?
- 6 Are more sensitive questions left until last? Sensitive and demographic questions should be left until towards the end of the questionnaire. (Some people regard questions relating to their age, income and education as very personal.)
- 7 Are the pages attached so that they will not become separated or lost?
- 8 Are all the pages clearly numbered and arranged so that the interviewers or the respondents can follow the sequence easily?
- 9 Does each page have a note at the bottom directing interviewers/ respondents to the next page?
- 10 Do the sections within the questionnaire form simple steps or subtasks which can be completed one at a time?
- 11 Does the questionnaire have ample white space, to avoid a dense cramped or cluttered appearance?
- 12 Has the questionnaire been piloted?

Refer to Weiers (pages 232–239) for a full discussion of techniques to maximise response rates to questionnaires.

QUESTIONNAIRE SAMPLES

Overleaf are annotated sample segments from self-completion questionnaires and telephone questionnaires. These samples demonstrate some commonly used practices in questionnaire design. However, they are not intended to be used as proformas.

1 TAFE STUDENT QUESTIONNAIRE FOR SELF-COMPLETION

Instructions to respondents

Purpose of collection

This national survey is collecting information from all 199x TAFE graduates. The survey will assist in measuring the transition of TAFE graduates into the labour market, and improving the quality and relevance of TAFE courses.

Confidentiality

Your completed form remains confidential to the researchers. No information will be released in a way that would enable identification of any individual.

Due date

Please complete the form and return it in the reply-paid envelope to X organisation by 30 June 199x.

Help available

If you have any problems in completing this form please contact us: Telephone 1800 XXXXXX Facsimile (03) XXXXXXXX

How to answer

Please tick one box only (unless otherwise requested). Some tick boxes have 'Go to' instructions. By following the 'Go to' you skip questions that are not relevant to you.

Instructions to respondent printed in upper case and bold

Precoding of answers indicated

Open-ended question

Q1.1 Why are you doing this course?

TICK ALL THE ANSWERS THAT APPLY TO YOU IN THE FIRST COLUMN. YOU CAN TICK MORE THAN ONE BOX.

- | | | | |
|--------------------------|----|---|-------|
| ☐ | 1 | No jobs available | _____ |
| ☐ | 2 | Compulsory part of apprenticeship | _____ |
| ☐ | 3 | To get a qualification | _____ |
| ☐ | 4 | To gain industry skills | _____ |
| ☐ | 5 | To get a job | _____ |
| ☐ | 6 | To upgrade my job skills | _____ |
| ☐ | 7 | For general interest - not for a job | _____ |
| ☐ | 8 | As a stepping stone into another course | _____ |
| ☐ | 9 | Because the CES makes it compulsory | _____ |
| ☐ | 10 | To help get promotion or a better job | _____ |
| ☐ | 11 | To fill in time | _____ |
| ☐ | 12 | My parents want me to | _____ |
| ☐ | 13 | I could get in with my school results | _____ |
| ☐ | 14 | It's exactly the course for the career I want | _____ |
| ☐ | 15 | It's not too big a step for me at this time | _____ |
| ☐ | 16 | My teacher's advice | _____ |
| ☐ | 17 | I couldn't get into university | _____ |
| ☐ | 18 | Some other reason | _____ |

Q1.2 Now think about the two reasons that were most important to you in deciding to do this course.

PUT A '1' IN THE FINAL COLUMN ON THE LINE NEXT TO THE REASON WHICH IS THE MOST IMPORTANT FOR YOU. THEN PUT A '2' NEXT TO THE SECOND MOST IMPORTANT REASON.

Underlining
used to
emphasise
important
terms or
phrases

Q2 Did you have any full time, part-time or casual job of any kind (including an apprenticeship), that lasted for two weeks or more, during the six months before starting your course?

Note:

If you had more than one job, please report your main job – the job in which you usually worked the most hours.

Notes
included
to clarify
meaning

Yes, worked for payment or profit ☐ GO TO Q4

Yes, but on leave from main job ☐ GO TO Q4

Yes, unpaid work in a family business ☐ GO TO Q4

Yes, other unpaid work

No, did not have a job

Skip
question

Q3 Did you actively look for work during the six months before starting the course?

Note:

*Examples of actively looking for work include:
being registered with the CES; writing, telephoning or
applying in person to an employer for work; or
advertising for work.*

Yes, looked for full-time work ☐ GO TO Q6

Yes, looked for part-time work ☐ GO TO Q6

No, did not look for work ☐ GO TO Q6

2 EDUCATIONAL PROGRAM QUESTIONNAIRE FOR TELEPHONE INTERVIEWS

Rotation
instruction -
to avoid bias
in responses

Q1a Thinking back to how you found out about this program, from which of the following sources did you hear about the program?

ROTATE START POINT BETWEEN RESPONDENTS

Q1b And what was the main single source which prompted you to inquire about the program?

Open-ended
question

	Q1a	Q1b
	All	Main
Advertising eg newspaper, magazine or radio	1	1
Articles in newspapers, radio, TV	2	2
Via past participants	3	3
Via direct mail	4	4
Via your general business contacts	5	5
Via another source (please specify)	6	6
Don't know/can't remember	7	7

Note the
conversational
tone

Key points
underlined to
ensure clarity
in instructions

Q2 We are interested in what motivated you to take part in the program. I am going to read you a number of possible reasons for doing the program, and I would like you to give me a score from zero to ten to show how important each factor was to you. If it was very important, give a score of 10, and if it wasn't important at all, give a score of zero. You can give any score from zero to ten to show how you feel.

Check
instruction
was
understood

ROTATE START POINT BETWEEN RESPONDENTS. AFTER FIRST SCORE, CHECK RESPONDENT HAS INTERPRETED SCALE CORRECTLY eg, IF SCORE OF 8 GIVEN, SAY: 'SO THAT WAS IMPORTANT TO YOU'.

Here's the first statement.

I took part in the program:

Coding

Instruction to
interviewer
not to
paraphrase
response but
to record
what was
said

- to develop my general business management skills ☐
- to learn ~~some~~ specific business skills ☐
- to develop entrepreneurial skills ☐
- to build a network of business contacts ☐
- to obtain credits towards a tertiary qualification ☐
- to meet professional development criteria ☐
- to improve my career prospects ☐
- for some other reason, which was ☐

(RECORD VERBATIM)

Q3 Thinking about the main reasons for your undertaking the program, how well did the course meet your needs? Did it meet your needs:

- | | |
|----------------|----------------------------|
| Very well | ☐ 1 |
| Quite well | ☐ 2 |
| No real option | ☐ 3 |
| Quite poorly | ☐ 4 |
| Very poorly | ☐ 5 |
| Hard to say | ☐ 6 |

A range of descriptors, so as to pick up most responses

IF RESPONSE WAS 'VERY WELL', 'QUITE WELL', 'QUITE POORLY' OR 'VERY POORLY', ASK Q4, OTHERWISE GO TO Q5.

Skip question directs interviewer to one of two options

Q4 Why do you say that?
FURTHER PROMPT: Anything else?

Instructions to interviewer to probe further for responses

Q5 When you were considering this program, did you consider any other program as well?

- | | |
|---------------------------|----------------------------|
| Yes | ☐ 1 |
| No | ☐ 2 |
| Don't know/Can't remember | ☐ 3 |

Option for those respondents who can't remember

Demographics are often placed at the end of an administered questionnaire because by that time in the process most respondents are sufficiently comfortable with the process to be willing to volunteer such information. Questionnaires by the Australian Bureau of Statistics and other bodies who can collect information under the authority of the Census and Statistics Act sometimes begin with demographic questions. However, if you are relying entirely on the respondent's goodwill to collect the information, it is advisable to place the demographics at the end of the questionnaire.

3 DEMOGRAPHICS SEGMENT OF A FACE-TO-FACE OR TELEPHONE INTERVIEW

I now have a few final questions which will help us classify the information we collect.

Use
categories
rather than
ask for a
specific age

Q1 Which one of the following age groups do you belong to? Are you ...?

- | | |
|----------|----------------------------|
| Under 25 | ☐ 1 |
| 25-39 | ☐ 2 |
| 40-50 | ☐ 3 |

Option for
those
unwilling to
disclose

Q2 Which of the following best describes the annual pre-tax income of your household?

- | | |
|--------------------|----------------------------|
| Less than \$10,000 | ☐ 1 |
| \$10,000-\$29,999 | ☐ 2 |
| \$30,000-\$49,999 | ☐ 3 |
| \$50,000-\$79,000 | ☐ 4 |
| \$80,000 plus | ☐ 5 |
| Not stated | ☐ 6 |

Q3 Which of the following best describes your final level of education?

- | | |
|--|----------------------------|
| Completed high school to Year 10 | ☐ 1 |
| Completed high school to Year 12 | ☐ 2 |
| Post-secondary qualification (certificate/diploma) | ☐ 3 |
| University degree (3 year degree) | ☐ 4 |
| Graduate diploma | ☐ 5 |

Q4 In which country were you born?

**ALLOW RESPONDENT TO ANSWER UNPROMPTED AND THEN
ALLOCATE ANSWER TO ONE OF THE CODES**

- | | |
|------------------------------|----------------------------|
| Australia | ☐ 1 |
| UK or New Zealand | ☐ 2 |
| Vietnam | ☐ 3 |
| China | ☐ 4 |
| Hong Kong | ☐ 5 |
| Philippines | ☐ 6 |
| Indonesia | ☐ 7 |
| Other (please specify below) | ☐ 8 |

Time-saving
and clearer
not to read
through
all the
categories.
This is not
generally a
sensitive
question

Q5 Record sex

- | | |
|--------|----------------------------|
| Female | ☐ 1 |
| Male | ☐ 2 |

Q6 Record state

- | | |
|-----------------|----------------------------|
| NSW | ☐ 1 |
| Victoria | ☐ 2 |
| South Australia | ☐ 3 |
| Queensland | ☐ 4 |

if a
telephone
interview,
question 5
and 6 are
answered
without
reference
to the
respondent



Managing the research process

FIELD WORK

Conducting field work requires understanding and some organisation of the process. Interviewers should be selected with great care. Not everyone makes a good interviewer. In qualitative research the calibre of interviewers is as important as the discussion guide. In quantitative research the capability of the interviewer is still very important.

Interviewer training

Interviewer Quality Control Australia has set out a code of practice for field work in all areas of market research in Australia. Its *Accreditation Manual* sets out detailed requirements for meeting standards of industry practice in interviewing. It is fully endorsed by the Market Research Society of Australia, the Association of Market Research Organisations, and the Field Management Group. The Executive Director of Interviewer Quality Control Australia can be contacted through Market Research Society of Australia (Victoria), PO Box 582D, GPO Melbourne Victoria 3001 Telephone (03) 9499 2679.

Interviewer Quality Control Australia stipulates that all interviewers require a minimum of 4 hours of classroom training in the following areas:

- Definition of market research
- Code of conduct in relation to interviewing
- Approaching the respondent
- Identification procedures to establish *bona fides* of the interviewer/company
- Coping with refusals
- Conducting an interview using:
 - closed questions
 - open-ended questions
 - scales
 - administration and completion of questionnaires
 - field sampling procedures and quota control
 - terminology and jargon
- Completing an interview
- Quality control procedures applied to interviewers.

There are many guides to training interviewers available. Commence with the *Fieldwork Handbook* produced by the Market Research Society of Australia and recommended by Interviewer Quality Control Australia.



For qualitative research

Qualitative research is highly dependent on the calibre of the interviewers or group moderators. As the interviewers use the questions as a guide rather than as strict instructions, qualitative interviewing requires a very highly trained and skilled field force. Selection of interviewers is critical. They need to use their initiative in deciding which issues to follow up and probe, and which ones to let go.

Briefing of interviewers should provide them with full background to the project, the research objectives, the type of information that needs to be collected and how the research will be used. The more that qualitative interviewers understand about the nature of the project, the better equipped they will be to guide the respondent to discuss the most relevant matters – even if they are not on the discussion guide.

Check and supervise the work as it comes in. Do not wait until the end of the survey to find that one of your interviewers is asking or recording something incorrectly. Quality control is essential. Qualitative interviewing often benefits from a preliminary debriefing half way through the project to check how the research is going. This debriefing may also identify issues raised by some respondents that merit exploration with other respondents.

For quantitative research

Full briefing of the interviewers and in-house practice in using the questionnaire is recommended. Even a little training improves the quality of the data which you will collect. Never hand a questionnaire to someone and tell them to go out and use it.

With a structured questionnaire, stress to the interviewers that they must:

- ask the questions and present set answers *exactly* as they are written so that they remain as free as possible from bias and error;
- not add information that is not in the questionnaire. The interviewer should not try to 'help out' by providing ad hoc explanations of the questions;
- not accept instant 'don't knows'.

PROCESSING DATA

Data processing, like all other aspects of the research process, can be outsourced to an agency. Even if you are conducting most of the research yourself, there are advantages to outsourcing the data processing for a large quantitative survey.

For quantitative research

Get a head start on the process without waiting for all data to arrive – while the survey is being conducted or even earlier.

Expect a large volume of paperwork. Surveys often generate more material than anticipated. Keep the process neat and orderly. Have a place for everything and everything in its place. It is a good idea to number each questionnaire so that it is identifiable for later checking.

The first task is to proof read the questionnaires to make sure that they have been completed correctly and fully. It is standard industry practice to 'audit' 10 per cent of the total sample to make sure that they were completed by the respondents nominated. All accredited agencies follow this procedure. If you are conducting your own research it is a good practice to follow.

If you are having someone else in the institute enter and process the data, make sure that you have discussed and reached understanding on their and your requirements for the process. Explain to them the criteria for acceptance and rejection of completed questionnaires and make sure that these criteria are used consistently. Ask them to inform you how the final data sheets will be presented. Discuss any changes you want to that system of presentation *before* processing starts.

The overall task of processing basic survey data is generally 'easy' because it is 'packaged'. The raw data is keyed into a computer and an appropriate software package used to collate the data in the ways that you and the processor have determined. If you are undertaking complex, multivariate analysis (such as factor analysis, cluster analysis, segmentation, choice modelling and so on) requiring expert processing, make sure that you and your 'expert' both fully understand what can be done with the data and what is required of the processing.

If you have more than about 50 respondents and about 30 questions, don't try to analyse your own data using a spreadsheet application. Spreadsheets are not designed for such a purpose. Instead use an analysis package such as SPSS, Statview or Microtab which is designed to provide a range of outcomes from basic frequencies and cross-tabs through to more sophisticated analytical techniques such as regression analysis and perceptual mapping.

If you need to use an analysis package and you can afford it, use a processing agency, whether external or in-house, that is accustomed to this type of processing. They can probably complete the job more quickly and cheaply than you can yourself.

Detailed mathematical discussions of data processing can be found in Dillon et al (chapters 13–16); Weiers (chapters 12–16) and Green (chapters 15–20).



For qualitative research

There is no one best way to process qualitative data. Each qualitative researcher will have a preferred method. However, there are common stages in the process.

Preparation of data

Full and detailed notes are needed on every interview. Each interviewer should provide you with typed notes on each interview conducted.

The debriefing

Debriefing a qualitative field force is a very important part of the processing (and analysis). It can take several hours to run through the topics outlined in the discussion guide. It is a good idea to tape record the debriefing to make sure that you retain all the views of the research team. The debriefing is a good way for you to get an overview of the differences and similarities in the data collected by different interviewers.

Processing and analysis

In qualitative research, processing and analysis of the data are usually done simultaneously by reading all the notes, identifying similarities and differences in responses between groups in the sample, and looking for patterns of response amongst segments in the sample.

Analysis of qualitative data is reliant on intuition and judgement – and also on meticulous and careful reading of the data. Some people like to manage this process by using highlighters or 'stick it' notes or even by cutting out relevant comments from each transcript. Whatever way is chosen, it requires patience and methodical reading and re-reading of each interview report or group transcript a number of times, noting what is deemed important and relevant.

Processing a sample of 40–50 depth interviews is a long and exacting task. Allow enough time to do it thoroughly. See Gordon & Laingmaid (chapter 10) for a further discussion of processing and analysis of qualitative data.

ANALYSING DATA

Analysis of qualitative data is carried out simultaneously with its processing (see above). Once quantitative data has been processed it is in a form that is ready for analysis. If you have done the processing yourself, you will have had some advance indications of the results. Otherwise this is your first contact with the raw results of the research.

First, recall the objectives of the research. Refresh your mind with why you have done this research in the first place, to ensure that the statistical

analyses to be used are designed to suppress detail and reveal *important* findings. There is no point in running the data through every statistical test possible simply because you have that capability. You want to use only the statistical analyses that are useful to your overall aims.

Types of analysis

There are two types of basic analysis. The first is a *frequency* analysis, a simple count of each question to show how many respondents gave each answer.

The second is one-way *cross tabulations* (*cross tabs*) to obtain numbers and percentages for each question, dissected according to a particular variable such as age, gender, educational experience or industry type.

Key variables need to be selected for their capacity to deliver important findings. Is a respondent's age likely to make a difference to the way that they have answered a question? Is industry background likely to influence the answers given? The usual variables are age, gender, education, occupation. There will be others that are specific to each survey, for example heavy/medium/light users of a course type. Specify to your processor what variables you want used in your data analysis.

Once all the data is counted and cross-tabulated you can begin to analyse. As you analyse the data you may identify some further specific analysis needs, in which case you request the processor for more runs with new tables or scores or a more sophisticated form of analysis.

Select the simplest tool that will deliver the results that you need. Good use of a simple method is far more effective than poor use of a complex method.

REPORTING

The research report is the means of conveying the salient results of this research to the decision makers who are relying on the results for their management decision. It is very important that the report is easy to read and technically correct. The suggestions below, following Alreck & Settle, can be used for your own report writing or can help you to judge the quality of a report written by an external agent.

Format

All business reports, including research reports, should commence with the conclusions. It is important to answer the overall research questions early so that the reader of the report can discover quickly and easily the purposes for conducting the research and its findings.



Some busy executive staff are going to read only the executive summary and introduction to a full report, so those elements need to convey key messages and be able to stand alone if necessary.

Executive summary

The executive summary should be only two to three pages long and highlight the objectives, key findings and information sources. Keep the paragraphs brief – three to four sentences per paragraph. Use headings with key phrases to identify sections.

The summary must be clear, concise and attract interest. A reader should be able to pick up the executive summary to find out quickly and easily the main objectives of the research and its main findings. An executive summary is no place for detail. It should provide a readable and informative overview of the research.

Conclusions and recommendations

The second section of the report should state the conclusions and recommendations that flow from the findings of the report. There should be a logical relationship between the findings, the conclusions drawn by the researcher and the recommendations that are being made. The extent to which recommendations are needed will depend on the research brief. In some cases, only findings and conclusions are called for. Again, this section should be concise.

Main body of the report – the findings

The findings should be reported as clearly as possible. Divide the text into sections according to types of information, topics or issues. Introduce each major section by identifying its purpose or the reason for including it. Avoid technical jargon used in statistics or processing in favour of conventional language. Use short simple sentences rather than long complex ones. Identify tables, figures and other inclusions by consecutive number. Be selective with content so that the main points receive emphasis. Interpret rather than merely describe the results.

GENERAL GUIDELINES FOR AN EFFECTIVE REPORT

- Keep it simple and to the point.
- Always refer to 'respondents' thereby avoiding any suggestion that your results are applicable to the whole population.
- Put detailed technical information in an appendix.
- Include discussion guides and questionnaire instruments in an appendix.
- Don't report percentage findings to the decimal point. That gives a false impression of the real level of accuracy.
- Don't talk about small percentages of the responses as being important. Differences of 1 per cent and 2 per cent are often unreliable. Focus on the big picture.
- Use disclaimers. If the sample size is small, say so. Always state the total number of respondents rather than just the percentage – if the total number of respondents were 6, then stating a 50 per cent preference, when referring to 3 individuals, is misleading.
- Use plenty of white space on the page to help convey complex and detailed information clearly and concisely. The report should look uncluttered and easy to follow.



Case studies

CASE STUDY 1

HOW CAN WE BEST USE THE PROMOTIONS BUDGET?

Problem definition

The publicity and promotions officer at the institute was faced with a recurring problem. She had to make ongoing decisions about how to spend the institute's promotional budget. This included making decisions about what proportion of the budget to use on advertising (compared to other promotional activity), what the advertising should say and where the advertising should be placed.

The officer had been in the job for 2 years. The director kept stressing the need for effective promotions that would work 'smarter' with limited resources. Because, so far, the promotions officer had tended to make her decisions based on talking to people who had been at the institute for a long time, the promotional strategies had been minor variations on what had been done 'last year'. She was not convinced they were the best strategies.

Information requirements

She came to the view that if she understood how students made their decisions about which institute to choose, she would have a better idea of what motivated the students, and who really made the decisions and at what points in the decision-making process. She could then direct institute promotions and publicity to have a real impact. But how could she find out some answers to these questions?

Is there a need for formal market research?

The promotions officer was convinced that she needed to understand the students' decision processes if she was to be able to make the best decisions about promoting the institute. She felt a need to conduct some research with both current students and some potential students.

Informal or formal research?

Would it be enough to ask long-term staff of the institute and the students themselves how students decide to come to the institute? This course of action would take little time and money. It would not be controversial. Senior staff were pretty confident that they understood their students and their markets. They may feel that she was ignoring their expertise and experience by conducting formal market research. The institute had not done much formal research in the past and she was not sure how the senior staff would react to the idea.

However, the promotions officer had been relying on internal expertise for the last two years and, in her view, there were serious knowledge gaps.



The institute had been spending a significant amount of money on advertising, and the promotions officer had no idea what effect it was having or which bits were or were not working. The promotions officer decided she needed to do formal market research.

In-house research or outsourced research?

Although she was the publicity and promotions officer at the institute and had done some in-service marketing courses, the promotions officer knew very little about market research. Further, there was no-one else in the institute who was assigned to either marketing or to market research.

However she had never used an external agency. How would she know if they were any good? Would she be able to manage them? Would the results be useable and worthwhile? Would she 'blow the institute's budget'?

On balance, the promotions officer felt she should investigate an external agency. The institute did not have the available personnel resources to conduct its own formal research.

Finding an agency

As a novice in the area, the promotions officer decided to start her search by phoning the Market Research Society of Australia. The staff there were able to give her a preliminary listing of local market research agencies experienced in this type of research.

She then rang a number of these agencies and discussed the task with the staff there. She was then able to make a short list of those agencies where the staff were helpful, patient and seemed to have the appropriate expertise in the education market. She figured that if they were not good at managing preliminary inquiries in a friendly and helpful way, they would not be good to work closely with over the duration of the project. She also rang staff in her position at other institutes to try to get some leads on who they used.

Finally, she looked up the staffing lists for the institute and found that one of the lecturers in Business Studies had qualifications in Marketing and seemed to have done quite a bit of market research. As she predicted, he was too busy to get involved in the research. However, he was able to offer her some useful advice and agreed to be co-opted onto a committee for managing the research project.

The research brief

The promotions officer then prepared a research brief. The external agencies, no matter how good, could not be expected to deliver results if she was unsure of what she wanted from the research. The brief included a

descriptive introductory section, detailing the background to the project and the context in which it was set. It described the management decisions for which this research was needed, and the specific research objectives.

The research brief also indicated the budget and timing (with an anticipated completion date) and requested that in its proposal the agency respond to particular issues, for example the research agency was asked to provide a detailed description of the proposed methodology and a rationale for its selection; and to cost each component of the methodology separately, so that each could be re-considered for inclusion on the basis of cost.

The promotions officer then submitted the brief to three research agencies. She evaluated the agency proposals based on their understanding of the brief, the appropriateness and cost effectiveness of their proposed approach and their demonstrated expertise in the area.

What type of research?

Once the agency had been commissioned the promotions officer had to make, or at least approve, many decisions about the actual type of research. The agency could make recommendations but she had to take responsibility for those decisions.

Qualitative or quantitative research?

The type of information required here was exploratory. The institute needed to understand how students made their choices. Accordingly, qualitative methods were judged to be the most appropriate.

There was no point in trying to survey students on why, when and how they made their choices of institute because the researchers did not yet understand the dynamics of the decision process. A survey approach at this stage would generate data but it would be descriptive rather than analytic and would not answer the questions that the promotions officer was asking. It would actually raise more questions.

Who are the respondents?

Who should be included in the research? One obvious group was current students who had recently made the decision to attend this institute. The promotions officer thought it would be useful to also obtain insight into why some students did *not* choose the institute. First-year students from competing institutes should be included. Other questions considered by the promotions officer at this stage were:

- Should final-year high school students be included?
- Who else has an influence on the decision process – parents? teachers? peers? anyone else?

- 
- Should respondents be restricted to the local area or be drawn from wider afield?

Based on which groups could provide the most relevant information, the promotions officer and the research agency decided to include:

- current students of the institute
- current students of other institutes
- parents
- teachers.

How should they be interviewed?

While the promotions officer and the researcher had decided to use qualitative methods, they still had to decide whether to use group discussions or depth interviews. The choice of technique depended on how the promotions officer and the research agency believed decisions were made. They decided that the primary decision-making unit was likely to be the student and his or her parents, so decided to do depth interviews at home with the student and parents (the decision-making unit).

Given that students may also be influenced to a fair degree by peer group pressure, the promotions officer and the research agency decided to supplement the depth interviews with some focus group discussions using affinity groups of students, so they could gauge the effect of group dynamics.

For interviewing the teachers, a group discussion format was also seen to be the best choice because teachers were influencers, not decision makers in this process. Their views and beliefs about how students make their decisions could thus be well aired in a group format. It was also efficient in terms of time and money.

Managing the process

Having made the above decisions, the promotions officer waited while the research was conducted. During this period she was in regular contact with the researchers and was kept informed about progress of the research. She also asked for regular progress reports which she passed on to her manager.

Reporting and presentation

The promotions officer had arranged to have the report presented by the agency to the senior management team of the institute. It was important that they should know the results of the research and be able to ask questions directly of the research agency.

Using the results

With a bank of information on why, when and how students choose an institute, the promotions officer had a sound basis for gauging what communication strategies were going to appeal to students, which channels of information were most important to them, how much influence parents have on the process, how much influence teachers have on the process, and at what time of the academic year most of these decisions are being made.

The promotions officer was well equipped with solid information on which to base her promotion and publicity decisions. She could be confident about selecting the most effective messages in the most effective media, directed to the most relevant decision makers at the right time.



SUMMARY OF CASE STUDY 1

Problem definition	How can we make best use of promotion and publicity? What messages should we send? To whom? Using which media? At which time of year?
Information requirements	How do students decide which institute to attend? What 'features' do they use to compare courses and institutes? Who else is involved in helping make the decision?
Is there a need for formal market research?	Yes. We do not understand sufficiently well how students decide which institute to attend. The pattern may have changed in recent years. Our spending on advertising and promotion warrants investing in research to direct it effectively.
Internal or external resources?	Commission research externally. Internal staff lack expertise in research techniques or do not have the time to dedicate to the project.
The research brief	Introduction describing the background to the project and providing institute context. Statement of management decisions to be made as a result of the project. Statement of research objectives. Indication of budget available and expected completion dates. Request that research agency provide detailed description of methodology and rationale for usage, and costing of project by task. Brief submitted to three agencies.
What type of research?	Qualitative data will be collected from current first-year students at this and other institutes, final-year high school students and their teachers. Focus groups will be used for teachers and high school students, and depth interviews with current first-year students.
Managing the process	Selection of research agency, agreement on agency's approach and costing, and regular progress meetings whilst research is conducted. Arrangement of formal presentation of results by research agency to senior managers.

CASE STUDY 2

A CASE OF DECLINING DEMAND

Problem definition

The director of the institute was concerned about enrolments. Whilst overall enrolments seemed reasonably healthy, in the previous couple of years a slow but steady decline had occurred in enrolments in many recurrently funded courses. The director was becoming concerned with this decline in the programs he regarded as the 'bread and butter' of the institute.

Information requirements

- Had student needs or the profile of students changed in the local area? (Was the market moving to non-recurrent programs?)
- Were students going elsewhere because other providers had a higher profile or were seen to have better courses?
- Were institute staff focusing their energies on non-recurrent programs at the expense of recurrent programs?

Is there a need for formal market research?

The director wasn't sure why enrolments were declining but he knew he couldn't orchestrate remedial action without more information.

Informal or formal research?

The director decided that first of all he should harness internal resources and expertise. He asked staff who managed recurrent and non-recurrent programs, as well as those involved in advertising and promotion, to prepare for a workshop to 'brainstorm' potential reasons for the change in enrolments.

As part of the preparation for this session, he asked a staff member to look at several existing data sources to see if these shed any light on the problem. The following data was analysed:

- Data from the Australian Bureau of Statistics and from the Commonwealth Department of Employment, Education, Training and Youth Affairs, to look at any changes in demographics and training demand. (Was the market changing?)
- The institute's own data bank on past students, to find out whether the demographic profile of students had changed. (Did the institute's client base match the overall market or was it skewed in certain ways?)
- The institute's own data bank on student satisfaction with recurrent courses, to find out whether the quality of recurrent programs had diminished. (Were enrolments falling because quality had declined?)



The workshop was very productive. The data analysis and staff feedback helped the director narrow down the potential reasons for the drop in enrolments. The internal course satisfaction data suggested program quality was not an issue (satisfaction had not been declining). However, the comparison of external data with the institute's student data base suggested that even though there was a strong market amongst school leavers, the institute's enrolments were declining in this market segment. Staff managing programs agreed they had been putting more energy into chasing new target markets in the past couple of years at the expense of the school-leaver segment.

However, staff at the workshop agreed they still had gaps in their knowledge with regard to the school-leaver segment. In particular, they did not know:

- the types of courses being considered by the current batch of final-year students;
- the types of institutes being considered by final-year students;
- how the institute was regarded by school leavers and how the institute compared to competitors.

Thus the workshop enabled the director to identify gaps in the institute's collective knowledge, and at whom any further research should be aimed.

In-house research or outsourced research?

The director knew the institute had conducted its own research before, and had staff who were quite expert in developing questionnaires and doing telephone and mail surveys. Indeed, the institute captured quite a lot of data about its current students via telephone and mail surveys. The institute was also fortunate to have a staff member who knew how to collate and analyse the data using the computer program SPSS.

The director organised a meeting with relevant staff to discuss an appropriate research methodology and whether it was more cost effective to conduct the research in-house or externally.

The staff at the meeting decided to commission the research.

- They didn't want to bias responses, and hence thought the research would be better conducted by an independent third party, with the name of the commissioning provider not being divulged to respondents.
- Whilst they had the resources to conduct research with current students (who were obviously easy to identify and contact), they did not have the required resources to find and interview a reasonably representative

sample of final-year students within their catchment area. This would require a lot of interviewers who would need to work in the early evening and at weekends (in order to 'catch' students).

Finding and briefing an agency

This was easy. The institute had commissioned research in the past and had formed a good working relationship with a particular supplier. Quotes would be obtained from two other agencies (based on exactly the same methodology).

What type of research?

Given the institute had quite simple information requirements, the institute and research agency agreed that telephone interviews would be appropriate, cost effective and would suit the timetable (for which information was required quickly). Based on the research objectives, and the institute's knowledge of the market (for example knowledge of potential competitors and potential courses), a structured questionnaire was drafted and piloted with 30 respondents.

Apart from ensuring the questionnaire was effective and complete, the pilot also enabled the research agency to discover the incidence of final-year students within households in the agreed geographic catchment area. This meant field costs could be finalised. (Previously, they had been based on a best estimate of the incidence).

Once the pilot was complete, and final revisions had been made to the questionnaire, a total sample of 800 final-year students was achieved within the catchment area. This sample size meant the director could have a high level of confidence in the aggregated results and, more importantly, could break the sample down into smaller groups (for example to compare students from public and private schools or to exclude students who wanted to study courses not offered by the institute).

Managing the process

Reporting and presentation

In order to contain costs, and because a staff member knew how to specify and analyse cross tabulations, the director did not ask the research agency to provide a written report. Rather, the institute asked for the data to be provided in the form of cross tabulations which were then analysed internally.



Using the results

Once the data was analysed, the director had an informed view on:

- the types of courses in demand amongst final year students;
- the key features sought in a course;
- the types of providers being considered by students (which indicated who the main competitors were);
- the key features sought in a provider;
- who students took advice from, and which source of advice was most valued (the director had been particularly keen to assess the importance of the student career counsellors in secondary schools in order to decide whether the institute should target them more energetically);
- the institute's positioning relative to key competitors (achieved by asking respondents to rate different providers on a series of important features and to rank providers based on their overall preference).

The results from the study were very enlightening, and provided the director with information for developing strategies to reverse the downward trend in the institute's enrolments.

SUMMARY OF CASE STUDY 2

Problem definition	Declining enrolments in recurrent programs.
Information requirements	Need to determine the causes of decline.
Is there a need for formal market research?	Need exists for formal and informal research. Preliminary informal research consists of brainstorming workshop with key staff and analysis of existing data to narrow down the range of possible causes of decline. Informal research identifies school leavers as an important market segment which has been neglected and which needs to be better understood.
Internal or external resources?	Decide to outsource in order to protect against respondent bias and to overcome resourcing problem of identifying and interviewing a large number of final-year students.
The research brief	Standard brief to a single research agency. Once the research methodology is finalised, further quotes test the competitiveness of the initial quote.
What type of research?	Telephone survey, using structured questionnaire developed using pre-existing knowledge within the institute. Questionnaire piloted to ensure effectiveness and to establish incidence of final-year students within catchment area. Total sample of 800 provides reliable data, and allows for results to be broken down into sub-groups.
Managing the process	Decision to split the process to contain costs, and to take advantage of internal expertise and facilities. The research agency conducts the pilot and the survey, and presents the results in the form of cross-tabulated data. Expert staff within the institute analyse the data.



CASE STUDY 3

SHOULD WE RAISE THE FEES FOR OUR SHORT COURSES?

Problem definition

The principal sensed that some short courses offered by her private institute were underpriced. Similar short courses offered by some of the universities were significantly more expensive, and her analysis of course content suggested these courses were not offering anything different.

Information requirements

The principal felt confident that her courses were of high quality. Course assessments conducted with students and sponsoring employers were always very positive. She insisted that formal measures of student satisfaction were kept and monitoring had indicated that they were consistently high. So the principal knew she had 'a good product'.

However, she also knew she could not afford to raise the fees if that were to jeopardise the number of enrolments in short courses. She did not have the luxury of excessive demand to protect the institute against a fall in enrolments. She needed to know whether and by how much she could increase the fees without suffering a drop in enrolments. In addition, she needed to make sure she did not alienate some key clients who provided her with a constant supply of students.

Is there a need for formal market research?

Informal or formal research?

The principal had canvassed the opinion of staff, and every staff member seemed to have a different point of view! Whilst she felt confident her staff were very close to the market, which meant they were quick to recognise new opportunities and to meet client expectations, she also knew that determining a market's price sensitivity was a tricky business. The institute just didn't have the knowledge to help her make a decision. She needed specialist information.

In-house research or outsourced research?

This decision was an easy one to make in one sense. The principal simply did not have a budget available to commission an external agency. However, she did have systems in place which allowed the institute to capture a lot of data about people who made inquiries about courses and about the students themselves.

Another reason for doing the research in-house was that none of her staff had experience in briefing or managing an external agency and she did not

know which agency to approach. The principal felt more comfortable using in-house resources, though she realised this would present some limitations. She knew she would have to carefully define the scope of the research, and not be too ambitious in her expectations. For example, while it would be good to talk to a wide range of potential students the principal realised she would have sufficient resources to talk only to those who actually inquired about her institute's courses.

The principal also realised that in-house research would take longer to conduct at both data-collection and analysis stages, and she would need to streamline collation and analysis. (The last thing she wanted was a huge pile of completed questionnaires on her desk and to be wondering what she should do next.)

What type of research?

The principal decided there would be two phases to the research. The two would run concurrently. The first phase would involve the principal and other senior program managers talking to employers who currently sponsored students.

The principal thought of these interviews as qualitative depth interviews, but they would provide a second benefit of allowing her and other staff to catch up with some important contacts. In conjunction with her staff, the principal prepared a discussion guide which covered:

- how the employer felt about different aspects of the courses, and how satisfied the employer was overall with the courses;
- whether the employer was using similar courses from other providers and, if so, how the institute's courses compared both in terms of quality and price;
- how the employer felt about the current pricing of the courses, whether the courses were regarded as cheap, good value, the same as comparable courses, a little more expensive than other courses, or a lot more expensive;
- how the employer felt about an increase in fee pricing, and how the employer felt about different price points (the principal knew this part of the interview would need to be handled with sensitivity, but hoped that some of the earlier discussion would provide guidance);
- whether there was a need for volume discounts, which could be used to offset some of the impact of price increases with employers who provided a lot of business.

The principal decided to pilot the approach herself by doing a couple of interviews with employers she had a good relationship with.



The second phase

Over the years, the institute had developed an extensive data base, as the principal had ensured that information about students and inquirers was collected systematically and analysed regularly. Developing systems to collate and analyse the data had been a case of trial and error over the years, but the principal was now confident the institute had good systems in place. Indeed, the analysis, a regular agenda item at the institute's fortnightly management meetings, had often indicated emerging opportunities.

The second phase of the research would involve adding some pricing questions to the data collection sheets used for all people who inquired about courses (either in person or via the telephone) and for enrolling students. The principal had done some reading on how to ask questions relating to pricing. There was no definitive answer, so she decided on the following approach: All inquirers and enrollers were to be asked:

- at what price they thought the course represented good value for money;
- how likely they would be to enrol at this price;
- at what price they thought the course was starting to get a bit expensive;
- how likely they would be to enrol at this price;
- at what price they thought the course was too expensive to consider.

In addition, inquirers and enrollers were also to be asked what other courses they had seriously considered (or were seriously considering). This would provide comparative price points, as it was easy to ascertain what competitors were charging.

Managing the process

The principal piloted the qualitative depth interviews herself, provided feedback to senior staff, and then suggested staff use the approach with their own contacts amongst employers. Once everyone had done a couple of interviews, the principal called a meeting with staff to discuss the emerging picture and to talk through any potential problems staff had with the approach. Some further interviews were then conducted, followed by a workshop, where the results were discussed in more detail, along with their implications.

The principal decided the questions to be asked of inquirers and enrollers would be trialed for one month and then reviewed. Meanwhile she kept in touch with staff administering the questions to get their anecdotal feedback on how the approach was working.

After one month, the results were collated. As it had been quite an active period for short-course enrolments, the sample was reasonable, although

not large. The results provided some interesting insights, suggesting that for certain short courses, the institute was indeed competing with the universities and was regarded as low-cost by both employers and students.

The principal decided to collect more data before making a decision to increase the pricing, but she was most encouraged by the information which was coming through.

SUMMARY OF CASE STUDY 3

Problem definition	Should we raise the fees for our short courses (without adversely affecting demand)?
Information requirements	Need to determine who the courses are competing with, and the price sensitivity of the market (students and employers).
Is there a need for formal market research?	Need exists for formal research, as there is little data or knowledge on price sensitivity within the institute.
Internal or external resources?	There is no budget available to commission an external research agency. The institute does have good systems in place to capture data from 'inquirers' and 'enrollees', and senior staff have good contacts among employers.
What type of research?	Qualitative depth interviews among employers (conducted by senior staff). Addition of price and competitor questions to standard data sheet used for all inquirers and enrollees (either face-to-face or via the telephone).
Managing the process	Pilot of the qualitative and quantitative (data sheet) approaches with regular feedback loops. Analysis of qualitative interviews in a workshop session. Analysis of data sheets after one month, with the intention of continuing the approach and building up the sample.



CASE STUDY 4

HOW SATISFIED ARE OUR STUDENTS?

Problem definition

Several senior staff in the institute had recently been to a short in-service course on marketing post-secondary education. Having found the course to be both informative and helpful, they were determined to put some of what they had learnt into practice in their institute.

While they agreed that the institute had no major current problems in relation to enrolments, particularly in recurrent courses, they all felt that it would be a mistake to be complacent. The course had demonstrated to them the advantages of being proactive to avoid trouble in the future.

Information requirements

One area in which they believed that they could improve their systems was in tracking student satisfaction. They did 'measure' some aspects of student satisfaction within the institute now but the 'measurements' were fairly ad hoc, very little was done with the results and there was no consistency across the system in terms of *whether* satisfaction was to be measured and, if it was, *how* it was to be measured.

Most of the student satisfaction measures that were being taken were in the form of course evaluations. This group felt that they needed a wider range of satisfaction measures to understand student requirements. Some of the areas they believed should be covered were:

- provision of courses
- timetabling of classes
- teaching methods: course content, course assessment, course organisation
- library services: accessibility, range of resources, level of assistance
- cafeteria services: hours of opening, range of foods, pricing, service
- childcare services: availability, hours of opening
- career counselling: activities of career counsellors, range of services provided, effectiveness of services provided.

Is there a need for formal market research?

This group of senior staff decided that they should standardise formal systems for measuring student satisfaction and set up systems for using the results.

Informal or formal research?

The senior staff who had attended the course had a preliminary meeting to discuss how they should now proceed. They had all agreed that the institute

needed a more systematic method of measuring student satisfaction across a number of areas but what was the best way to achieve this?

The group was aware of a number of different areas in which student satisfaction was already being measured. Course evaluations were routinely carried out in their departments. However, it quickly became apparent that no one knew how many 'evaluations' were being carried out and that an overview of satisfaction levels across courses would require a common measuring instrument. It was decided to undertake formal research to put all of this 'measuring activity' onto a more systematic basis that could generate results that could be acted upon at an institute level.

At this preliminary meeting it was also determined that one person should take charge of the project. The head of the Business program was chosen as project manager because he had a background in research and a keen interest in developing an effective method of tracking long-term student satisfaction. His brief was to manage the process, utilising resources inside or outside the institute and report back to the meeting once he had prepared an assessment of needs and recommendations on how to meet them. The senior staff who had undertaken the marketing in-service course were to form an advisory committee which would meet at regular intervals to review progress on the project.

The meeting also considered how broadly student satisfaction should be measured. Staff felt that in the past they had tended to think about student responses only in terms of course evaluations. They decided to extend the measures of satisfaction to general services such as library, childcare, cafeteria and counselling, as these services mattered to students.

In-house research or outsourced research?

The project manager was aware of a number of satisfaction surveys already being conducted within the institute. Being experienced in conducting and managing research he knew how to tap the considerable amount of expertise in constructing data bases and analysing data within the institute. He decided to conduct the research in-house.

Apart from the cost considerations, the project manager thought that it would be more effective to conduct the research in-house because staff and students would be better placed to list the attributes that contributed to overall student satisfaction than would a group of external consultants. He also knew that institute staff, in particular, would have the best knowledge of the range of services that could be offered to students. He felt that external consultants would need considerable time to understand the institute sufficiently well to be able to do as good a job as would internal staff, and considered that the external perspective would offer little added value to the project.



What type of research?

With experience in constructing survey instruments, the project manager knew that the best way to achieve a satisfactory instrument was to take a two-phase approach to the task. The first phase of the research would be qualitative. It would be directed to developing an understanding of all the issues involved in student satisfaction. The second phase of the research would be quantitative, and comprise the construction of the survey instrument, piloting of the instrument, use of the instrument, analysis of data and reporting of results.

Managing the process

Qualitative research

The workshop

The project manager decided to start the process by conducting a workshop with institute staff who were currently administering their own course evaluation surveys. A workshop would be a good way for them to share information and for him to be able to get to know what student satisfaction measures were currently collected by the institute, where data was held and how it was used.

The workshop also provided an opportunity to introduce a range of staff to the idea of a more systematised and institute-wide form of student satisfaction survey. The workshop was an occasion on which the new system could be 'sold' to staff and staff input could be used in the development of the system. The workshop went to plan.

Focus groups

A number of focus groups were conducted with institute staff and with institute students to develop a comprehensive 'listing' of the relevant attributes that contribute to 'satisfaction'. The project manager employed a professional external moderator to conduct these sessions because he believed that he was less likely to get biased responses that way.

Quantitative research

The focus groups produced a large number of attributes of student satisfaction. They also indicated that two different types of questionnaires were required. The first type of questionnaire should be course-specific, to provide satisfaction measures on specific aspects of specific courses. It could be used at the completion of every course. The second type of questionnaire was a more general one that could be used annually to gauge student satisfaction with the institute on a more general basis. The project manager translated the general satisfaction attributes into specific questions and developed two pilot questionnaires.

The pilot

Both questionnaires were piloted with a small number of students who were asked not only to complete the questionnaires but also to comment on how relevant, credible and 'user-friendly' they found them. Students were also asked to provide suggestions for changes to the pilot questionnaires.

As a result of the pilot, a number of changes were made to the questionnaires. A second and larger pilot then followed. The data collected from those questionnaires were analysed and a number of different types of reports generated. These reports were then circulated to all heads of department and the senior administrative staff for comment.

Using the results

The survey results were analysed to develop benchmarks for current levels of student satisfaction. The analysis also highlighted areas of high satisfaction and areas of dissatisfaction. This information was then disseminated to the relevant staff for comment and recommendations for action.

Use of the questionnaires became a regular institute activity for measuring shifts in student satisfaction both at a general level and on specific issues. As a result of developing an institute-wide student satisfaction survey system the institute was better placed to:

- understand the causes of satisfaction and dissatisfaction amongst their students;
- improve its performance in areas where students expressed dissatisfaction;
- reinforce or develop its performance in areas where students expressed satisfaction;
- build a longitudinal data base of measures of student satisfaction with all aspects of the institute, that would be useful in long-term planning;
- better differentiate between issues that caused temporary if intense dissatisfaction and those that were more seriously undermining the standing of the institute;
- provide benchmarks for all institute staff on appropriate levels of 'service' to be provided to students.

The senior group who had started the project were very pleased with the outcomes of the research and felt confident that they now had a better grasp of what their students were seeking in the institute and how to meet those needs.



SUMMARY OF CASE STUDY 4

Problem definition	How satisfied are our students?
Information requirements	Need to determine general levels of satisfaction of students with both educational issues in the institute (provision of courses, timetabling and teaching of those courses) and with other services supplied (library services, canteen services, career counselling and other student services).
Is there a need for formal market research?	Formal, objective research should supplement existing fragmentary and anecdotal evidence of levels of student satisfaction.
Internal or external resources?	There are few funds available for this research. Further, it is believed that internal staff will have a better idea of the relevant attributes of service that should be measured.
What type of research?	Workshops amongst institute staff and institute students to develop a listing of relevant attributes that contribute to 'satisfaction'. Development of survey questionnaire(s) for academic and non-academic service issues. Continuing, regular measurement of levels of student satisfaction to build and renew data.
Managing the process	Workshop to consider the format of the survey questionnaire, followed by a pilot. Analysis of survey results and development of benchmarks for current levels of student satisfaction. Repeat of questionnaire on a regular basis to measure shifts in student satisfaction, overall and in specific areas over time.

CASE STUDY 5

WHAT IS THE IMAGE OF OUR INSTITUTE IN THE COMMUNITY?

Problem definition

The newly appointed director of this recently amalgamated multi-purpose, multi-campus institute had been director of one of the component institutes of the merger. He felt confident that he had a good grasp of the issues that were important to the new institute and of the concerns of members of the old institutes regarding the amalgamation.

The first task facing the new director and his senior managers was to agree on a new name for the institute. This was proving to be a more difficult task than he had envisaged. There were major internal issues, for example staff members from the former institutes were keen to see some continuity of the identity of their former institute in the new name. There were also significant external issues. The director believed that few people in the local community realised what the amalgamated institute had to offer and how it would work. All the changes in the system recently had probably left the local community confused about the institute.

The second issue of concern to the director was how to manage public relations and promotions activities for the new institute. Because of all the changes, he no longer knew how the community viewed the institute. He suspected that community images of the institute would be very confused.

The renaming of the institute would be an important symbolic beginning for the new institution. It was also going to be an expensive exercise. Consequently, it was important to make sure it was done well.

The director sensed that priority should be given to better understanding the image of the institute in the community. The renaming exercise could then be used to best advantage to help create a positive and favourable image of the new institute in the community.

Information requirements

Some of the things that the director felt that he, and his senior staff, needed to know were the following:

- Current images: Just what were the current images of the institute within the community?
- Development of image: How did the current images develop? What were they based on? How accurately did the current images reflect the reality of the institute and what it had to offer?
- Impact of image: How much did the image of the institute influence people's behaviour in relation to institute use?

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- Differing images: Did different sub-segments within the community have different images of the institute? If so, what were these? What impact did they have?

Is there a need for formal market research?

Informal or formal research?

Traditionally, institute directors have believed that they had a good grasp of the relationship between the institute and the community. They developed this understanding through their close personal ties with the community and by being represented on community boards and committees. The ties were both formal and informal. This type of arrangement had served the institutes well.

However, with amalgamations and the increase in the number of alternative vocational education and training institutes, the picture was changing. The director of a newly amalgamated institute was inheriting a combination of images of the former institutes which were not always compatible with the new image being projected.

A further complication was that the institutes themselves had changed markedly in the range and style of courses and programs that they were offering. In many cases, the community had barely kept up with the pace of change.

Consequently, the traditional intuitive grasp of the position and image of the institute in the community was no longer sufficient to account for all of the changes. A more formal approach was needed.

In-house research or outsourced research?

Although there were a number of staff within the institute who were well versed in undertaking research there were reasons, in this case, for favouring using external consultants.

- Politics: Because of the newly amalgamated nature of the institute it was felt that using external consultants would help to ensure that the results would be acceptable to all interest groups within the institute.
- Avoidance of bias: External consultants were more likely to get direct responses from participants in the research about the image of the institute than might be expected if institute staff were gathering the data.
- New perspective: External consultants could be expected to provide a new perspective on the institute. They have no personal history of the institute to influence their understanding of the issues.

The research brief

The director had little experience of using external agencies for research. In his former institute he had not been faced with the complex demands that

he was now facing. Decision making had been based on an intuitive understanding of the issues supported by some in-house research. In this new situation he was unsure of how to engage an external company.

He first telephoned other directors of institutes to ask them for recommendations. As a result of his telephone calls he came up with a short list of companies to approach and, just as importantly, a checklist of what to look for in an external research company:

- Professional standing: This is evidenced by membership of the professional bodies such as the Market Research Society of Australia.
- Track record: Some indication of track record in terms of current and past clients.
- Qualifications: Level of qualifications of staff employed in the agency.
- Expertise: Indication of expertise in the areas that you are wishing to research. This does not mean that an agency would need to be expert in researching the vocational education and training market but rather that they have some understanding of the area and, more importantly, be expert in the research techniques that are most suited to researching your project.
- Approachability: You need to feel comfortable with the contacts that you have in the agency. A successful outsourced research project is dependent on good working relationships between client and consultant. You should expect effective interpersonal relations with your consultant.
- Mode of working: Check to see who will actually be doing your research. Some agencies assign a project manager who does the client liaison while someone else does the actual research. In other agencies the project manager handles all aspects of the research from client liaison, to data collection, to report writing and presentation.
- Costing: Cost always remains an important consideration. However, it is not necessarily the case that the lowest priced proposal will produce the most effective results. The overall price of the project should be measured against the long-term cost of incomplete or inadequate results. The criterion here should be *value for money* rather than a simple measure of cost.

Equipped with this advice the director set out on his search for an external agency. The director was advised to *pre-brief* agencies before sending out a formal brief. Pre-briefing enables the agency to write the best possible proposal. The better an agency understands your requirements, the better they can tailor a proposal to your needs. Additionally, a pre-briefing contact with the agency gives some insight into the type of organisation with which you are dealing.



The director was advised that if you have done your preliminary work well you should only need to *brief three agencies*. Evaluation of proposals requires a lot of work on the part of the institute decision makers and to have too many proposals to consider can result in skimping the evaluation process.

The director was inexperienced in commissioning market research so he ensured that his *brief* to the agencies was as *clear and concise* as possible. He was interested in seeing what they could come up with in terms of proposed methodologies for the project rather than dictating a methodology to them. Nevertheless, he was very clear about the background to the project, the overall research objectives, the decisions for which he needed the research results, his timing requirements and the general range of the budget for the project.

What type of research?

Once the agency had been commissioned the director had to make, or at least approve, many decisions about the actual type of research. The agency could make recommendations but he had to take responsibility for those decisions.

Qualitative or quantitative research?

The type of information required was exploratory. The institute needed to understand the nature of the images that the community had of it. Accordingly, qualitative methods were chosen. There was no point in trying to survey members of the community on the types of images they had of the institute because that would not help the institute to understand how these images had been formed or how to alter or recast them.

A survey approach at this stage would generate data but it would be descriptive rather than analytic and would not answer the questions that the director was asking. In fact, it would tend to raise more questions.

Who are the respondents?

Who should be included in the research? One obvious group was current students and staff of the institute. However, the director wanted to know more about how the institute was perceived in the community more generally, including by sub-groups in the community who were important to the institute.

The director and the research agency decided to base their research on five groups:

- Local business: The institute's desire to increase its fee-paying courses meant that local business was a major future target.

- Local school staff: School leavers still made up most of the institute enrolments – so the views of teachers, career guidance officers and other educationalists were important.
- Local government: The role of the institute in the local community was seen to be important to the institute and they wanted to know how they were perceived by this group.
- Parents: Parents of students who are in their final years of high school.
- School leavers: Students in their final year(s) of high school.

How should they be interviewed?

While the director and the researchers had decided to use qualitative data, they still had to decide whether to use group discussions or depth interviews. The choice of technique depended on how the director and the research agency believed images were formed.

They decided that it would be valuable to conduct depth interviews with the business and government respondents. These two groups were likely to have formed specific images of the institute in different ways from one another.

For the school staff and students, group discussions were regarded as the most suitable technique. There was likely to be a natural affinity between these groups and the images of the institute may well have arisen from the same influences.

Managing the process

While the research was conducted the director was in regular contact with the researchers and was kept informed about progress of the research. He also asked for regular progress reports which he could share with senior staff at their regular strategy meetings.

Reporting and presentation

The director had arranged to have the report presented by the agency to the senior management team of the institute. It was important that they should know the results of the research and be able to ask questions directly of the research agency.

Using the results

With a bank of information about the way his institute was perceived by significant groups in the community, the director had a much better understanding of how images of the institute were formed by different groups. He had information on which to plan communication strategies that would appeal to particular groups. The institute possessed solid information on which to base its image building, renaming and promotion campaigns.



SUMMARY OF CASE STUDY 5

Problem definition	What is the image of our institute in the community?
Information requirements	Need to determine the range of perceptions and attitudes that major client groups have of the institute. These groups include students, industry, parents, teachers and other members of the community.
Is there a need for formal market research?	There is a need for formal research. The institute has previously relied on its intuitive understanding of how the community perceived it. However, a number of changes in institute clientele, and in the institute offerings, mean that this intuitive grasp is no longer sufficient.
Internal or external resources?	Politically it is necessary to commission an external agency to conduct this research. There is too much chance of skewed results if the research is conducted by institute staff. It is likely that respondents will tell institute staff what they want to hear. An external researcher is necessary in this case.
The research brief	Pre-briefing calls to a number of agencies, and briefs to three agencies. Decision made on the basis of the quality and value of the proposals.
What type of research?	Research about respondent perceptions and images of the institute is best suited to qualitative research. Depth interviews with selected samples of the major client and community segments.
Managing the process	The research agency would manage the project in conjunction with an internal project manager to provide additional information when needed and to ensure that the project is kept to schedule and budget. Close working relationship with agency throughout the whole process. Agency to deliver full presentation of results and report, detailing results and providing conclusions and recommendations.



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